



SMITHSONIAN INSTITUTION.
UNITED STATES NATIONAL MUSEUM.

CHESS AND PLAYING-CARDS.

CATALOGUE OF GAMES AND IMPLEMENTS FOR DIVINATION EXHIBITED BY THE
UNITED STATES NATIONAL MUSEUM IN CONNECTION WITH THE DEPART-
MENT OF ARCHÆOLOGY AND PALEONTOLOGY OF THE UNIVERSITY
OF PENNSYLVANIA AT THE COTTON STATES AND INTERNA-
TIONAL EXPOSITION, ATLANTA, GEORGIA, 1895.

BY

STEWART CULIN,

Director of the Museum of Archæology and Palæontology, University of Pennsylvania.

From the Report of the U. S. National Museum for 1896, pages 665-942,
with fifty plates.

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NOTE.

The following work has grown from a simple catalogue into its present proportions in an endeavor to illustrate the distribution of certain games, and by comparison elucidate their original significance. In the American part an attempt has been made to describe as far as possible the implements for games of the types mentioned, in American museums. Additions and corrections, to be incorporated in a subsequent publication, will be gratefully acknowledged by the author.

STEWART CULIN.

UNIVERSITY OF PENNSYLVANIA,
Philadelphia, August, 1897.

CHESS AND PLAYING-CARDS.

By STEWART CULIN,

Director of the Museum of Archaeology and Paleontology, University of Pennsylvania.

INTRODUCTION.

The object of this collection¹ is to illustrate the probable origin, significance, and development of the games of chess and playing-cards. Following up the suggestion made to the writer by Mr. Frank H. Cushing, they are both regarded as derived from the divinatory use of the arrow, and as representing the two principal methods of arrow-divination. Incidental to the main subject, various games and divinatory processes having a like origin, although not leading directly to chess or cards, are exhibited, as well as specimens of each class from various countries.

The basis of the divinatory systems from which games have arisen is assumed to be the classification of all things according to the Four Directions.² This method of classification is practically universal

¹This collection, for which a diploma of honor and gold medal were awarded at the Atlanta Exposition, was subsequently placed on exhibition in the U. S. National Museum, where it has since been augmented by many of the additional games described in this catalogue.—EDITOR.

²Some idea of the extent to which the classification of things according to the world quarters was carried in Eastern Asia may be obtained from the numerical categories in the second part of Mayer's Chinese Reader's Manual, from which the following examples are taken :

DIRECTIONS.	SEASONS.	COLORS.	ELEMENTS.	PLANETS.	METALS.	GRAINS.
North.	Winter.	Black.	Water.	Mercury.	Iron.	Pulse.
East.	Spring.	Green.	Wood.	Jupiter.	Lead, tin.	Corn.
South.	Summer.	Red.	Fire.	Mars.	Copper.	Millet.
West.	Autumn.	White.	Metal.	Venus.	Silver.	Hemp.
Middle.		Yellow.	Earth.	Saturn.	Gold.	Rice.

I append, for purpose of comparison, a list of some of the corresponding categories as they exist in the pueblo of Zuñi, New Mexico, kindly furnished me by Mr. Cushing.

DIRECTIONS.	SEASONS.	COLORS.	ELEMENTS.
North.	Winter.	Yellow.	Air (wind or breath).
West.	Spring.	Blue.	Water.
South.	Summer.	Red.	Fire.
East.	Autumn.	White.	Earth (seeds of).
Upper.	Day.	Many-color.	Waking or life condition.
Lower.	Night.	Black.	Sleeping or death condition.
Middle.	Year.	All colors.	All elements and conditions.

It should be observed that the connotations of color and direction vary from the above and from each other among the different American tribes, between Aztec and Maya, and between the different Mexican chroniclers.

among primitive peoples both in Asia and America. In order to classify objects and events which did not in themselves reveal their proper assignment resort was had to magic. Survivals of these magical processes constitute our present games. The identity of the games of Asia and America may be explained upon the ground of their common object and the identity of the mythic concepts which underlie them.

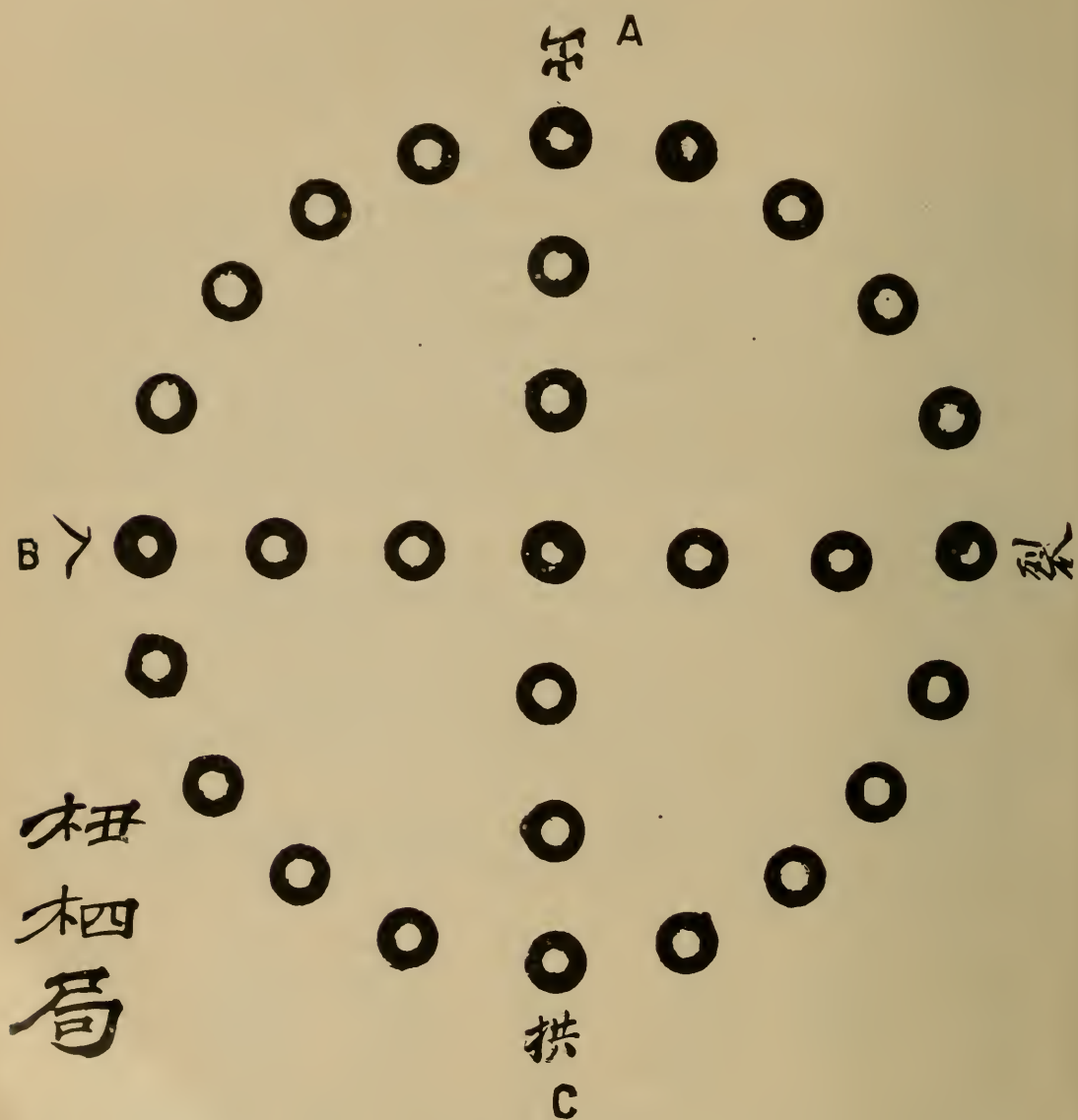


Fig. 1.

NYOUT HPAN. NYOUT BOARD.

Korea.

Cat. No. 18569, Museum of Archaeology, University of Pennsylvania. From Korean Games.

These concepts, as illustrated in games, appear to be well nigh universal. In the classification of things according to the Four Quarters we find that a numerical ratio was assumed to exist between the several categories. The discovery of this ratio was regarded as an all-important clue. The cubical dotted die represents one of the implements of magic employed for this purpose. The cubical die belongs, however,

to a comparatively late period in the history of games and divination. The almost universal object for determining number, and thence by counting, place or direction, is three or more wooden staves, usually flat on one side and rounded upon the other. Numerical counts are attributed to their several falls. A typical game in which these staves are employed is found in No. 1—the Korean game of *Nyout*.



Fig. 2.

NYOUT HPAN. NYOUT BOARD.

Inscribed with Chinese verse.

Korea.

Cat. No. 16487, Museum of Archaeology, University of Pennsylvania. From Korean Games.

1. NYOUT. Korea.

(a) Board and staves.¹

¹Nos. 16487, 16898, Mus. Arch., Univ. Penn. The board exhibited (fig. 1) is painted upon a sheet of Korean paper, 22½ by 26 inches, and was made for the author by Mr. Pak Young Kiu, secretary of the Royal Korean Commission to the World's Columbian Exposition, Chicago, in the summer of 1893. Another (fig. 2) has Chinese charac-

(b) Reproduction of native picture; Korean boys playing *Nyout*.¹

The national game of Korea. Two, three, or four persons play, moving objects used as men around a circuit, according to throws made with four blocks of wood used as dice. The circuit (fig. 1) is marked with twenty-nine points, twenty of which are arranged equally distant in a circle, within which is a cross composed of nine stations. The blocks ordinarily used are called *pam-nyout* or "chestnut *nyout*" (Plate 1, fig. 1), white and flat on one side and black and convex on the other. The pieces or men, called *mal* (Chinese, *má*), "horses,"² may consist of any convenient stick or stone. The throws count as follows:

4 white sides up, <i>nyout</i> ,	= 4
4 black sides up, <i>mo</i> ,	= 5
3 white sides up, <i>kel</i> ,	= 3
2 white sides up, <i>kái</i> ,	= 2
1 white side up, <i>to</i>	= 1

A throw of *nyout* or *mo* entitles the player to another throw, which he makes before moving his piece. The one who shall play first is determined by throwing the blocks, the highest leading. The players enter their men on the mark next on the left of the large circle at the top of the diagram, and move around against the sun. The object of the game is to get from one to four horses around the circuit and out again at the top. If a player throws so that one of his men falls upon another of his own he may double up the two pieces and thereafter take them around as one piece, they counting as two in the game. If a player's piece falls upon an opponent's the latter is said to be "caught," and is sent back to the beginning, and must be started again as at first. The captor is given another throw. Partners are permitted to move each other's pieces. In opening the game, if a player's man falls upon the large circle B, on the left, he returns to the goal by the radii B E, E A. If he overthrows the mark B he must continue on to C. At this point he returns by the diameter C A, but if he overthrows C he must continue on to D and around the circuit to A, the going-out place.

ters, reading as four lines of a verse, inscribed in the circles. Children frequently play upon a circuit drawn upon the ground. In the picture of the game (Plate 2) the boys are represented as throwing the blocks through a cuff, which one of them has removed for the purpose. This is done to render the result of the throws more a matter of chance than of skill, and is a substitute for a ring of straw, about 2 inches in diameter, affixed to the end of a stick about a foot long, which is stuck in the center of the ring for the same purpose. The selection of the wood for the sticks is not a matter of individual caprice. They are usually made of the wood of a thick bushy tree, like the *prunus*, called *ssa-ri*, used in China for bows, whence the game is called *sa-ri-nyout*. Another wood, *pak-tal-na-mou*, defined as a very hard wood of which mallets are made, is sometimes used, but the former is preferred.

¹Stewart Culin, *Korean Games*, Philadelphia, 1895.

²The term *má*, or horses, applied to men or pieces in a game, is of high antiquity in China, and was also given to the counters employed in the classical Chinese game of *T'au ú* or "pitch pot" (pitching arrows or arrow-lots into a pot), described in the *Li Ki*.

EXPLANATION OF PLATE 1.

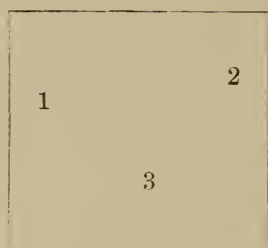


Fig. 1. PAM-NYOUT. Length, $\frac{3}{4}$ inch.

(Cat. No. 17608, Mus. Arch., Univ. Penn. Korea.)

Fig. 2. TJYANG-TJAK-NYOUT. Length, 5 inches.

(Cat. No. 17607, Mus. Arch., Univ. Penn. Korea.)

Fig. 3. METHOD OF HOLDING LONG NYOUT STICKS.



IMPLEMENTS USED IN PLAYING GAME OF NYOUT.

고종기 뒤늦은 학사



KOREAN BOYS PLAYING NYOUT.

From painting by native artist, reproduced in Korean Games.

the numbers, taken three at a time, with Korean text explanatory of their significance. A reproduction of the first section, entitled *Tjyek-să-tjyem* (Chinese, *chák sz' chím*) "Throwing Nyout Divination," from a little Korean handbook, *Tjik-syeng-pep* (Chinese, *chik sing fát*) "Correct Planet Rule" is given in fig. 3. The numbers represented by the throws are from "one" to "four" in sixty-four permutations, from which it will be seen that only three staves are used. *Nyout* or "four" is the highest throw, and an explanation is thus given of the name of the game.

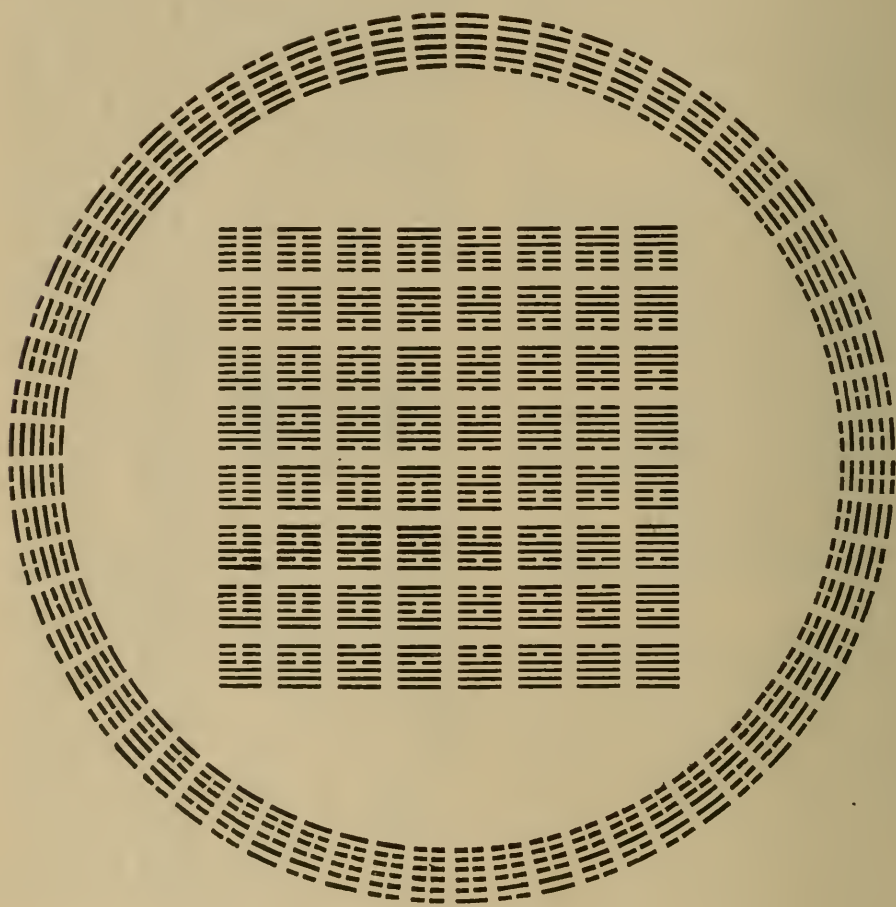


Fig. 4.

THE SIXTY-FOUR HEXAGRAMS.

China.

After Legge.

The Chinese *Book of Divination* consists of sixty-four diagrams, *kwá*, composed of combinations of unbroken ——— with broken lines — — —, six being taken at a time, and the resulting diagrams being known as the sixty-four *kwá* (fig. 4). Each of these diagrams is designated by a name and accompanied by a short explanatory text. Now the sixty-four hexagrams are regarded as an expansion of the eight trigrams (fig. 5), called the *pát kwá* or eight *kwá*, formed by combining the same unbroken and broken lines, three at a time. The unbroken lines in the diagram are called *yéung*, "masculine," and the broken lines *yam*, "feminine." It is apparent that if the two sides of the Ko-

rean blocks be regarded as representing the unbroken or masculine lines and the broken or feminine lines the trigrams will form a record of the throws when three blocks are used, and the hexagrams when six blocks are taken. From this I regard the divinatory use of the *nyout* blocks in connection with the handbook as illustrating the origin of the Chinese *Book of Divination*, to which the handbook presents an almost perfect parallel.¹ As it appears from the foreign names of the stave-throws in Korea that the system is foreign and non-Chinese, confirmation is afforded of the theory of the foreign origin of the *Book of Divination* advanced by Professor Terrien de Lacouperie. A detailed account of *nyout* is given by the writer in his work on Korean Games.

The game of *nyout* may be regarded as the prototype of a large class of common games, such as the Game of Goose, Backgammon, Pachisi, and Chess. It is clearly divinatory in its associations, the diagram representing the world with its four quarters. The *number*, by means of which *place* is determined, is discovered by tossing the blocks or staves.

The assumption that the *nyout* staves were derived from arrows, suggested by Mr. Cushing, is based upon evidence furnished by corresponding American games; for example, in the Kiowa game of *Zohn ahl*, No. 3, where three of the staves bear marks like arrow feathering. In throwing the long *nyout* staves it is customary to hold three crosswise over the other (Plate 1, fig. 3), in somewhat the same manner as in the Zuñi game of *Shó-lí-we*. (Compare fig. 112.)

2. GAMING ARROWS.² Kiowa Indians. Indian Territory, United States.

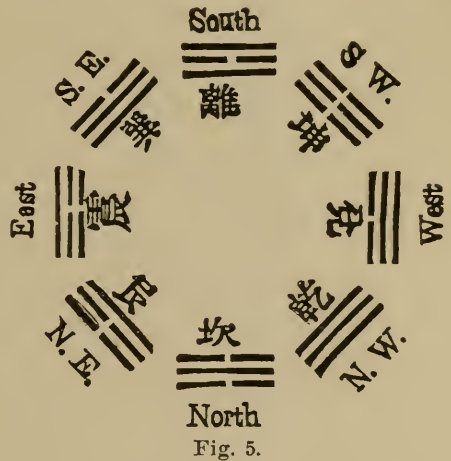


FIG. 5.
THE PÁT KWÁ OR EIGHT DIAGRAMS,
ACCORDING TO FUH-HI.

China.

From Mayer's Chinese Reader's Handbook.

¹I am informed that in the system of fortune-telling known in Japan as *yeki* (No. 65), in which splints are ordinarily used, three small blocks are sometimes tossed to determine the diagrams. In this method, known as *Arai shin yeki*, from *Arai*, the name of the reputed inventor, three rectangular blocks, called *sangi*, about 3 inches in length, made of some hard wood—cherry, or, preferably, ebony—are employed. Two of the opposite long sides are plain. The two other opposite faces are marked with vermilion ink in Chinese characters: On one, *T'in*, "Heaven;" one, *T'i*, "Earth," and the other *Yan*, "Man." The determinations are made according to the positions in which the marked sides fall one to another, which are referred to a special treatise. Another similar method employed in Japan, also attributed to *Arai*, is by means of three ancient "cash" or coins, which are tossed from a tortoise shell. My informant, Mr. K. Wadamori, of Tokio, himself a *yeki gakusha* or "*yeki* scholar," tells me that dots are frequently employed in Japan in noting the diagrams, as in the Malagassy *sikiddy*.

²Lent by Stewart Culin. Reproductions made by Mr. Cushing from originals in the United States National Museum (Cat. No. 152913). Collected by James Mooney.

Six arrows made of single pieces of maple wood, 29 $\frac{1}{4}$ inches in length (Plate 3). The heads are carved and painted. According to the collector, Mr. James Mooney, they are thrown with the hand like a javelin. and the player who throws farthest wins. It is a man's game.

It is probable that these arrows were actually used in a game extremely common among the Plains Indians. It consists in the players tossing arrows in turn at a mark. The object of each player after the first is to throw his arrow so that it will lie across the arrow or arrows

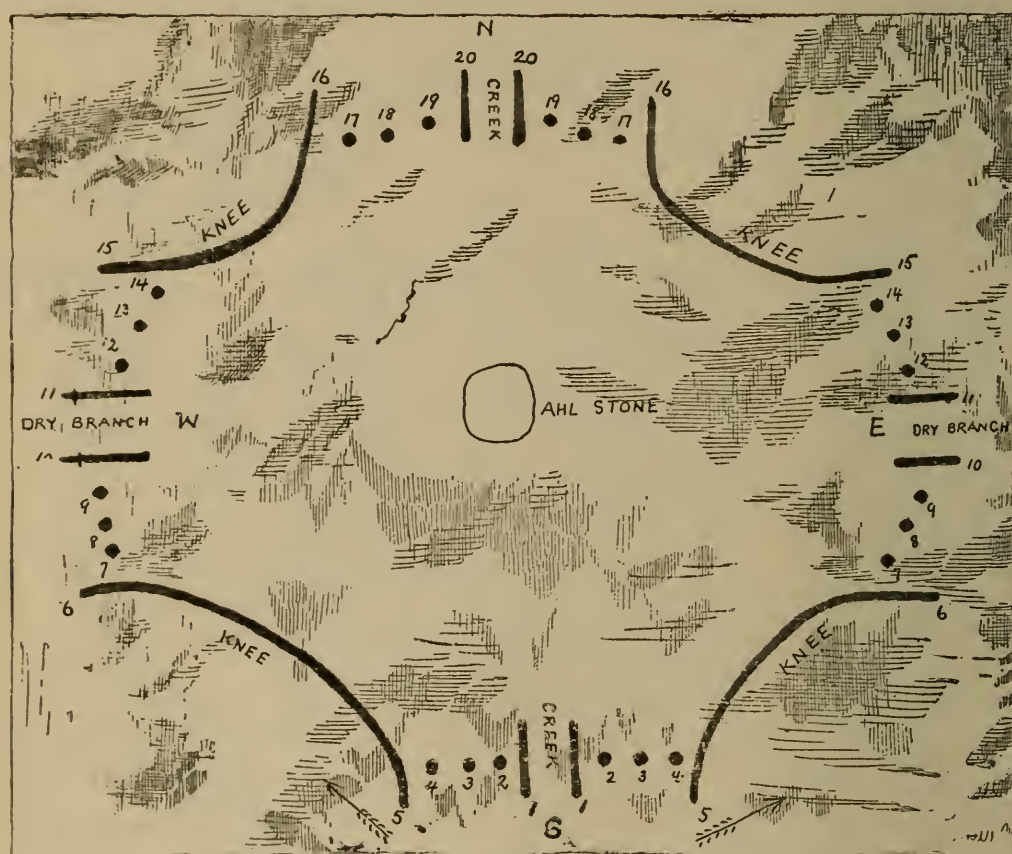


Fig. 6.

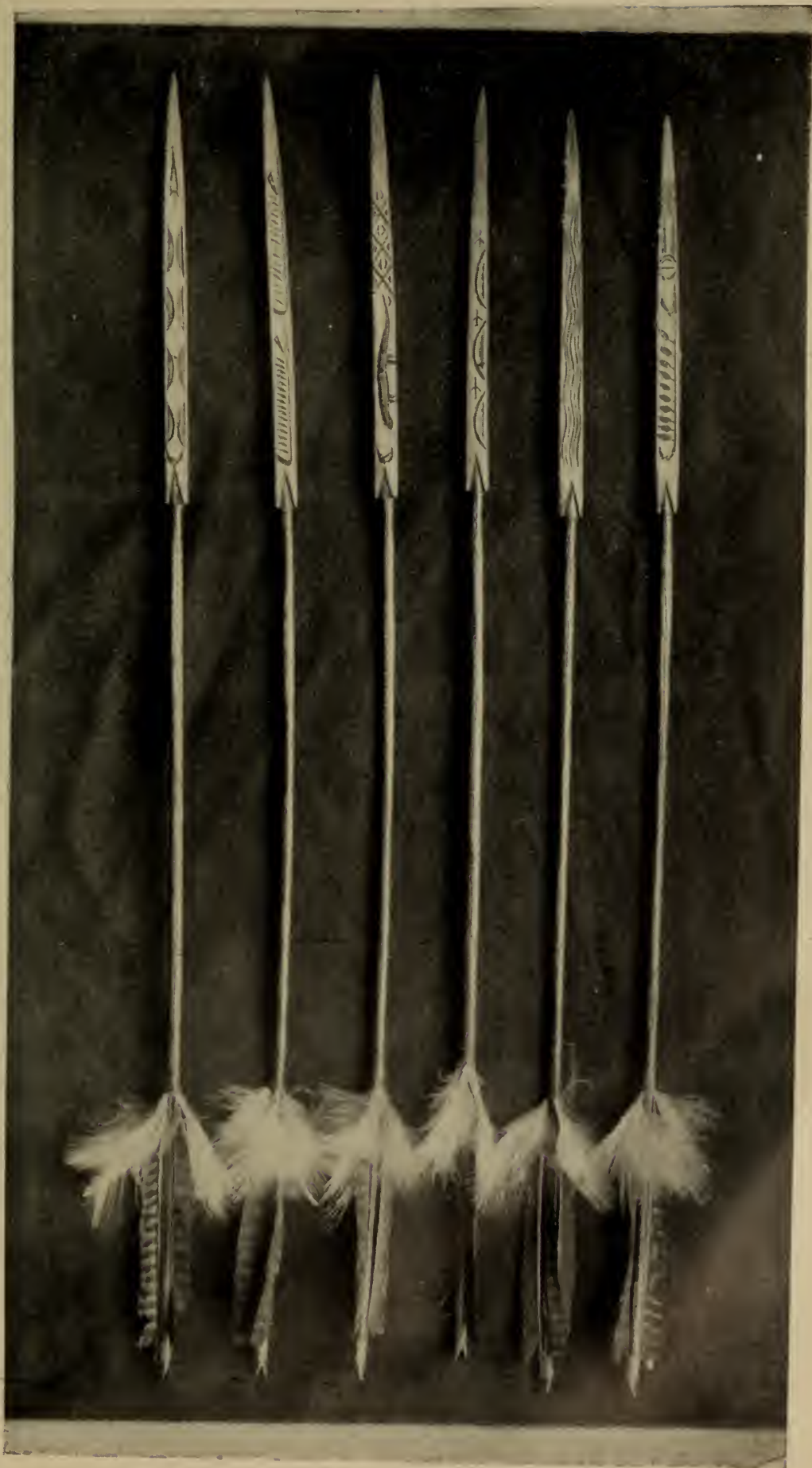
CLOTH FOR ZOHN AHL.

Kiowa Indians, Indian Territory.

Cat. No. 16535, Museum of Archaeology, University of Pennsylvania.

that have been tossed before.¹ Mr. Cushing informs me that the counts usually depend upon whether the tossed arrow falls upon the other at its head, middle, or foreshaft.

¹ Mr. E. W. Davis has given me an account of this game, as seen by him played by the Apache of Geronimo's band in 1889, in St. Augustine, Florida. He states that the mark was about 10 feet away. "The arrows were tossed point first. The first man to throw was required to land on the mark. If he did so he got his arrow back. Once an arrow in the field, the object of the next player was to toss his arrow so that it should cross the first thrown, and so on through the crowd. I have seen as many as six play, and often all would toss around without anyone winning. In this case the arrows on the ground remained in the pot, so to speak. The play then went on, each player winning as many arrows as he could succeed in crossing with his own, until the whole number was removed."



GAMING ARROWS.

Length, 29½ inches.

Kiowa Indians, Indian Territory.

Cat. No. 139013, U.S.N.M.

The incised designs, painted red, yellow, green, and blue, are in part easily recognizable as the calumet with primer, bow and arrow, the lightning, and the symbols of the Four Directions on the uppermost arrow (Plate 3), which are painted from left to right with the colors red, green, blue, and yellow. Mr. Cushing identified others as the war staff, or standard, and shield; day or dawn signs with turkey tracks; day signs with stars; horse tracks, and the "man" sign. Mr. Mooney, in reply to my inquiry, informed me that the Kiowa attach no special significance to these carved arrows, and were unable to explain the designs.

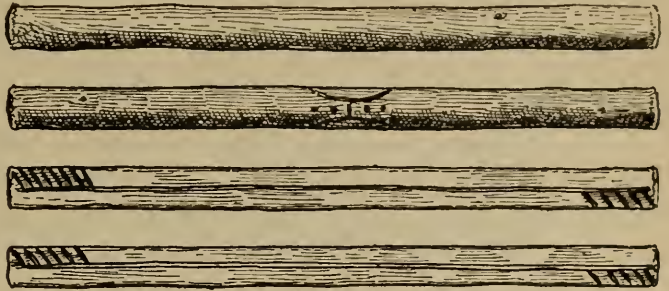


Fig. 7.

STAVES FOR ZOHN AHL.

Length, 10 inches.

Kiowa Indians, Indian Territory.

Cat. No. 16536, Museum of Archaeology, University of Pennsylvania.
From Korean Games.

These arrows, carved and painted with cosmical emblems, are here introduced to illustrate the use of a veritable arrow, specialized for the purpose of a game, among the American Indians.

3. ZOHN AHL,¹ commonly known as the "Awl Game." Kiowa Indians, Indian Territory, United States.

- (a) A cloth, called the "awl cloth."
- (b) Two awls.
- (c) Flat boulder, called the "awl stone."
- (d) Four prepared staves, called *ahl* or "wood."
- (e) Eight other sticks, to be used as counters.²

The "awl cloth" (fig. 6) is divided into points by which the game is counted. The curved lines upon it are called "knees," because they are like the knees of the players.

The space between the parallel lines 1 and 1 and 20 and 20 is called "the creek," and the corresponding spaces between the parallel lines at right angles are called the "dry branches."

Three of the "*ahl* sticks" (fig. 7) have a red stripe running down the middle and one has a blue stripe. They are held by the player in one hand and struck downward, so that their ends come on the "*ahl* stone" with considerable force. If all the sticks fall with the sides without grooves uppermost, the play is called "white," and counts ten. If all the grooved sides come uppermost, it is called "red," and counts five. Both of these throws entitle the player to another throw. If one grooved side is uppermost, it counts one; two grooved sides, two, and three grooved sides, three. The game is played by any even number

¹ Zohn, "creek;" *ahl*, "wood."

² Nos. 16535, 16536, Mus. Arch. Univ. Penn. Collected by Lieut. H. L. Scott, U. S. A., who kindly furnished the description of the game.

of girls or women (never by men or boys), half on one side the line N S and half on the other. The flat *ahl* stone is placed in the middle of the cloth, and the players kneel on the edge. The two awls are stuck in the creek at 1 1. The player at A makes the first throw, and the throwing goes around the circle in the direction of the hands of a watch, each side counting the results of each throw on the "awl cloth" by sticking its awl just beyond the mark called for by the results of the throw. The moves are made in opposite directions, as indicated by the arrows.

If in counting any awl gets into the "creek" at N, that side must forfeit a counter to the other side and be set back to the "creek" at S. That side is then said to have fallen into the "creek," the object being to "jump over." If in their passage around the circle the two "awls" get in the same division, the last comer is said to whip or kill the former, who forfeits a counter, and is set back to the beginning. The counting continues until one gets back to the "creek" at S. The one first at S receives a counter, and if there is more than enough to take it to the "creek," the surplus is added to the next round; that is, the "creek" is jumped, and the "awl" put beyond it as many points as may be over. When one side wins all the counters, it conquers. If the game should be broken up before this event, the side which has the greater number of counters is the victor.¹

See account of game by Mr. James Mooney on page 731.

This game was selected for exhibition from many similar games played by different tribes in America as readily illustrating the probable derivation of the four staves. Three of them will be seen to appear to be marked on one face with the feathered shaftment of an arrow, while the fourth probably represents the atlatl or "throwing stick."

In the following pages a description is given of implements for American games of the preceding type contained in various museums of the United States, together with accounts of the methods of play, arranged alphabetically under linguistic families and tribes. For the purpose of comparison all games in which objects are tossed to determine number are included. Their relations one to another, whatever they may be, will doubtless become apparent through this and subsequent collections.

¹ Lieutenant Scott further states that the Kiowa have a custom of wetting the fingers and slapping them several times on the stone before a throw, and calling out "red, red," or "white, white," according to the number they desire to count; or, if but "one" should be required to throw the opposite party into the "creek," someone puts her finger into her mouth, and, drawing it carefully across the top of the stone, calls out *parko, parko* ("one, one"). Often before the throw the thrower will rub the four sticks in a vertical position backward and forward several times between the palms of the hands, to insure good luck.

"The Comanche have a similar game which they play with eight *ahl* sticks, and the Cheyenne and Arapaho are said to have a game which they play with *ahl* sticks, which are 2 feet or more long." (H. L. S.)

ALGONQUIAN STOCK.

ARAPAHO. Cheyenne and Arapaho Reservation, Indian Territory.
(Cat. Nos. 152802, 152803, U.S.N.M.)

Set of five dice of buffalo bone, marked on one side with burned

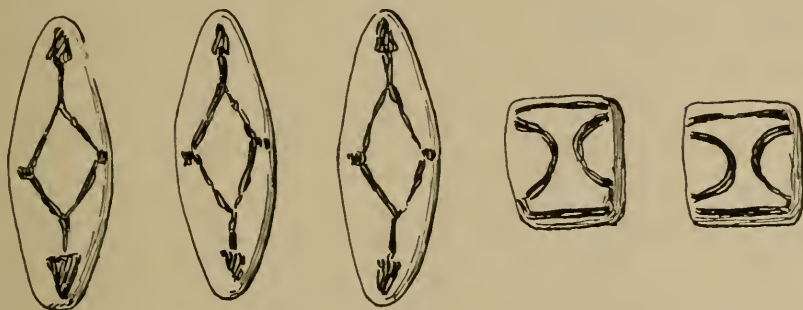


Fig. 8.

SET OF BONE DICE.

Lengths, $\frac{7}{8}$ and $1\frac{3}{4}$ inches.

Arapaho Indians, Indian Territory.

Cat. No. 152802, U.S.N.M.

designs (fig. 8), and basket of woven grass, 9 inches in diameter at top and $2\frac{1}{2}$ inches deep (fig. 9). The rim of the basket is bound with cotton cloth, and the inner side of the bottom is covered with the same

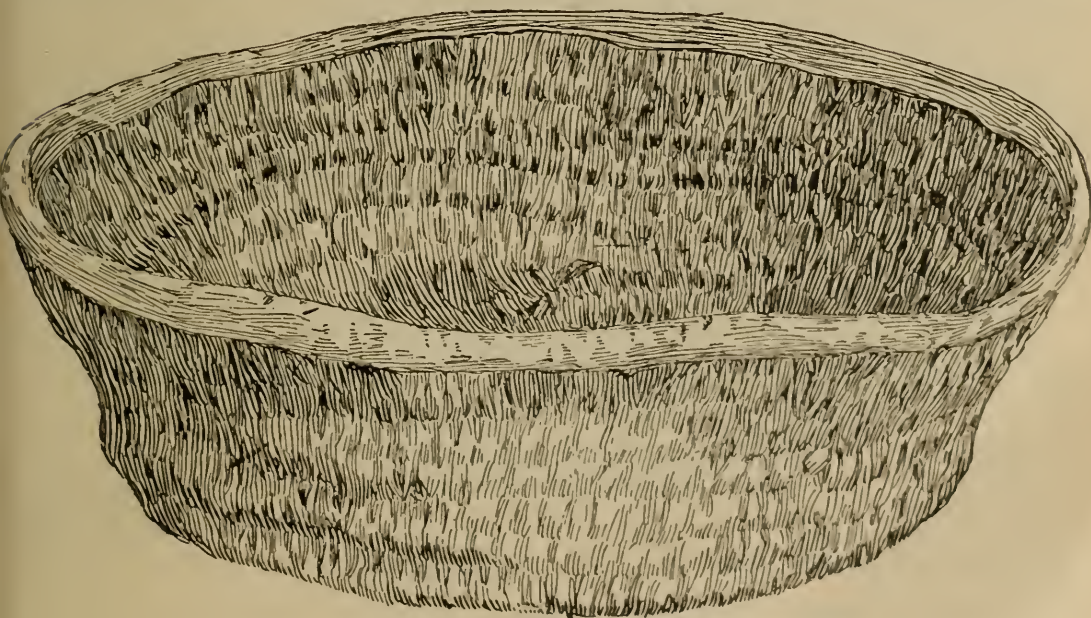


Fig. 9.

BASKET FOR DICE GAME.

Diameter, 9 inches.

Arapaho Indians, Indian Territory.

Cat. No. 152802, U.S.N.M.

material. The game is played by women. Collected by James Mooney, 1891.

The following account of the game is given by the collector:¹

The dice game is called *ta-ú sětá tina* (literally, "striking" or "throwing against" something) by the Arapaho, and *Mónshimúnh* by the Cheyenne, the same name being now given to the modern card games. It was practically universal among all the tribes east and west, and, under the name of hubbub, is described by a New England writer² as far back as 1634 almost precisely as it exists to-day among the prairie tribes. The only difference seems to have been that in the east it was played also by the men, and to the accompaniment of a song, such as is used in the hand games of the Western tribes. The requisites are a small wicker bowl or basket (*hat ě chí na*), five dice made of bone or plum stones, and a pile of tally sticks, such as are used in the awl game. The bowl is 6 or 8 inches in diameter and about 2 inches deep, and is woven in basket fashion of the tough fibers of the yucca. The dice may be round, elliptical, or diamond-shaped, and are variously marked on one side with lines or figures, the turtle being a favorite design among the Arapaho. Two of the five must be alike in shape and marking. The other three are marked with another design and may also be of another shape. Any number of women and girls may play, each throwing in turn, and sometimes one set of partners playing against another. The partners toss up the dice from the basket, letting them drop again into it, and score points according to the way the dice turn up in the basket. The first throw by each player is made from the hand instead of from the basket. One hundred points usually count a game, and stakes are wagered on the result as in almost every other Indian contest of skill or chance. For the purpose of explanation we shall designate two of the five as "rounds" and the other three as "diamonds," it being understood that only the marked side counts in the game, excepting when the throw happens to turn up the three "diamonds" blank while the other two show the marked side, or, as sometimes happens, when all five dice turn up blank. In every case all of one kind at least must turn up to score a point. A successful throw entitles the player to another throw, while a failure obliges her to pass the basket to someone else. The formula is:

1 only of either kind	= 0
2 rounds	= 3
3 diamonds (both rounds with blank side up)	= 3
3 diamonds blank (both rounds with marked side up)	= 3
4 marked side up	= 1
5 (all) blank sides up	= 1
5 (all) marked sides up	= 8

A game similar in principle, but played with six dice instead of five, is also played by the Arapaho women, as well as by those of the Comanche and probably also of other tribes.

ARAPAHO. Indian Territory. (Cat. No. 165765, U.S.N.M.)

Set of five bone dice marked on convex side with burned designs (fig. 10), and much worn basket of woven grass 10 inches in diameter at top and 2 inches deep (fig. 11). Collected by H. R. Voth.

ARAPAHO. Indian Territory. (Cat. No. 165765a, U.S.N.M.)

Set of five wooden dice, marked on one side with burned designs (fig. 12), representing on three a swallow or swallow hawk, and on two a dragon-fly. With preceding (Cat. No. 165765). Collected by H. R. Voth.

¹ The Ghost Dance religion, Fourteenth Annual Report of the Bureau of Ethnology, Washington, 1896, II, p. 1004.

² William Wood, New England Prospect, London, 1634.

Mr. Cushing suggested to the writer that these blocks were probably derived from similar gaming implements made of shards of pottery.

ARAPAHO. Darlington, Oklahoma.

Set of four dice; two oval bones, $1\frac{1}{4}$ inches in greatest diameter with

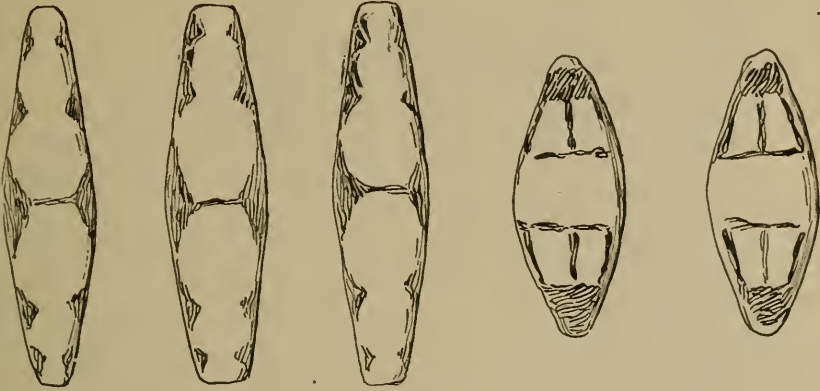


Fig. 10.

SET OF BONE DICE.

Length, $1\frac{3}{4}$ to $2\frac{1}{4}$ inches.

Arapaho Indians, Indian Territory.

Cat. No. 165765, U.S.N.M.

burned designs on one side, and two worked peach stones, also burned $\frac{1}{6}$ inch in greatest diameter (fig. 13). Opposite sides unmarked. Also shallow basket of woven grass, $9\frac{1}{2}$ inches in diameter at top and $1\frac{3}{4}$

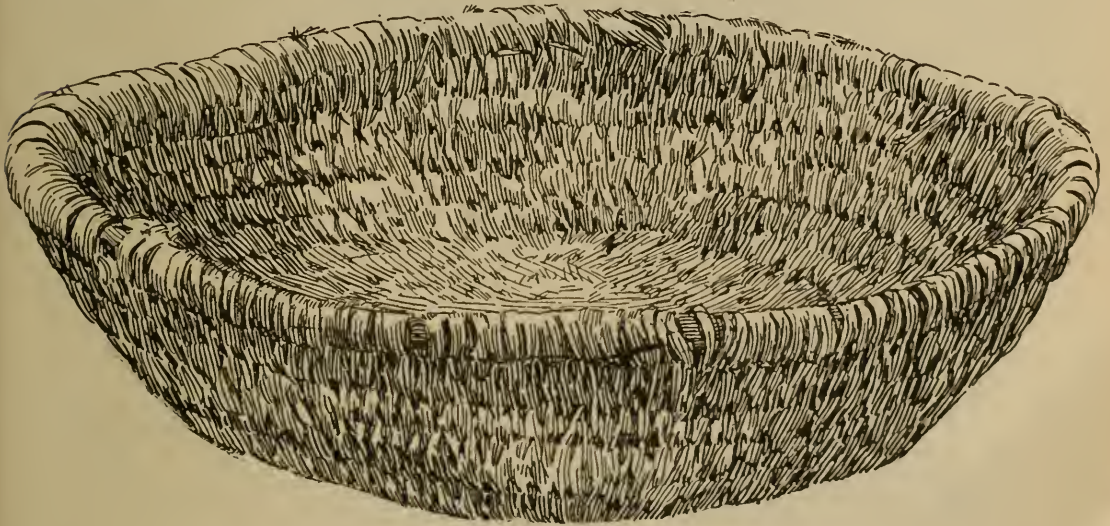


Fig. 11.

BASKET FOR DICE GAME.

Diameter, 10 inches.

Arapaho Indians, Indian Territory.

Cat. No. 165765, U.S.N.M.

inches deep. Collected by Mr. Abram D. Nace about 1888. They are now in the private collection of Mr. Charles H. Stephens, of Philadelphia, Pennsylvania.

CHEYENNE. Cheyenne and Arapaho Reservation, Indian Territory.
(Cat. No. 152803, U.S.N.M.)

Set of five bone dice marked on one side with burned designs

(fig. 14), and basket of woven grass $8\frac{1}{2}$ inches in diameter at top and $2\frac{1}{2}$ inches deep (fig. 15). Both sides of the bottom are covered with cotton cloth. Played by women. Collected by Mr. James Mooney, 1891.



Fig. 12.

SET OF WOODEN DICE.

Length, $1\frac{1}{8}$ inches.

Arapaho Indians, Indian Territory.

Cat. No. 165765a, U.S.N.M.

Mr. George Bird Grinnell has kindly furnished the writer with the following unpublished account of the Cheyenne basket game, which he describes under the name of *Mōn shī mō ūt*.

The Cheyenne seed, or basket game, is played

with a shallow bowl and five plum stones. The bowl (Plate 4) is from 3 to 4 inches deep, 8 inches across at the top—flattened or not on the bottom—and woven of grass or strips of willow twigs. It is nearly one-half an inch thick, and is strong. All



Fig. 13.

GAMING DISKS, BONE AND WORKED PEACH STONES.

Diameters, $1\frac{1}{4}$ and $1\frac{5}{8}$ inches.

Arapaho, Oklahoma.

Collection of Charles H. Stephens.

five seeds are unmarked on one side, but on the other (Plate 4) three are marked with a figure representing the paint patterns often used by girls on their faces, the cross being on the bridge of the nose, the side marks on the cheeks, and the

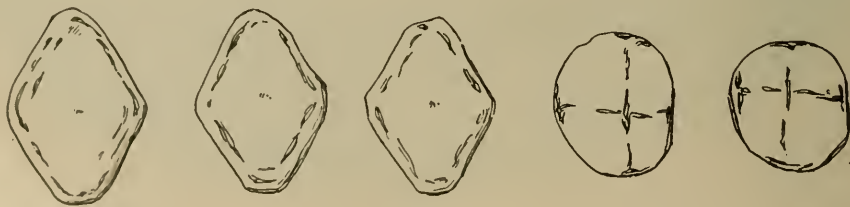


Fig. 14.

SET OF BONE DICE.

Lengths, $\frac{7}{8}$ and $1\frac{1}{8}$ inches.

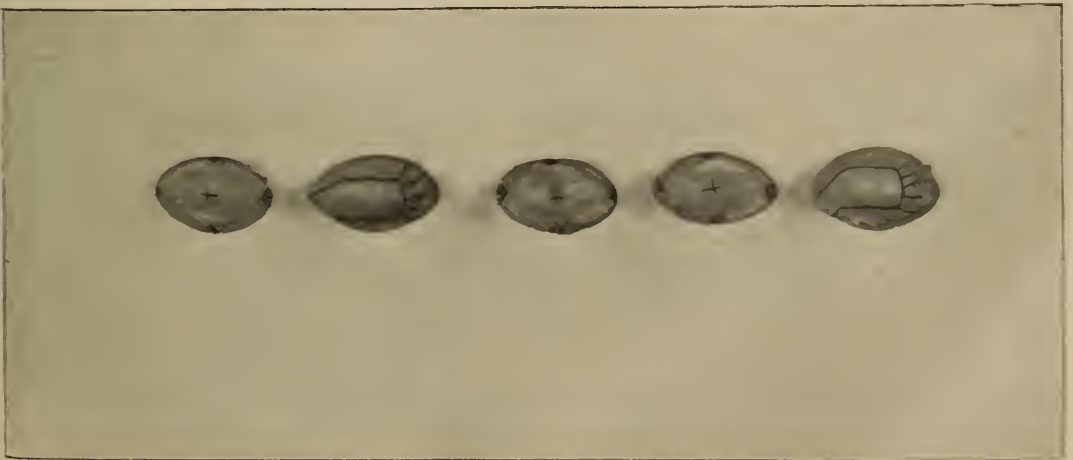
Cheyenne Indians, Indian Territory.

Cat. No. 152803, U.S.N.M.

upper and lower ones on the forehead and chin, respectively. The other two stones are marked with a figure representing the foot of a bear.¹

These plum-stones are placed in the basket, thrown up and caught in it, and the

¹Mr. Cushing identifies the mark of the cross with a star and the other with a bear's track, referring, respectively, to the sky and earth.



PLUM STONES AND BASKET FOR GAME.
Cheyenne Indians, Montana.
Collection of George Bird Grinnell.

combination of the sides which lie uppermost after they have fallen, determines the count of the throw.

The players sit opposite one another, and, if several are playing, in two rows facing each other. Each individual bets with the woman opposite to her. Each player is provided with eight sticks, which represent the points which she must gain or lose to win or lose the game. When a player has won all the sticks belonging to her opponent she has won the game and the stake.

There are several combinations of marks and blanks which count nothing for or against the player making the throw, except that she loses her chance to make another throw. Others entitle the thrower to receive one, three, or even all eight sticks, and each throw that counts anything entitles the player to another throw. All the players on the side of the thrower, i. e., in the same row, win or lose from those opposite to them as the thrower wins or loses. If the person making the first throw casts a blank, she passes the basket to the one sitting next her; if this one makes a throw that counts, she has another and another, until she throws a



Fig. 15.

BASKET FOR DICE GAME.

Diameter at top, $8\frac{1}{2}$ inches.

Cheyenne Indians, Indian Territory.

Cat. No. 152803, U.S.N.M.

blank, when the basket passes on. When the basket reaches the end of the line, it is handed across to the woman at the end of the opposite row, and in the same way travels down the opposite line.

In making the throw the basket is raised only a little way, and the stones tossed only a few inches high. Before they fall the basket is brought smartly down to the ground, against which it strikes with some little noise. Some of the throws are given below, the sides of the seeds being designated by their marks:

- 2 blanks, 2 bears, and 1 cross count nothing.
- 4 blanks and 1 bear count nothing.
- 5 blanks count 1 point; thrower takes 1 stick.
- 3 blanks and 2 bears count 1 point; thrower takes 1 stick.
- 1 blank, 2 bears, and 2 crosses count 1 point; thrower takes 1 stick.
- 2 blanks and 3 crosses count 3 points; thrower takes 3 sticks.
- 2 bears and 3 crosses count 8 points; thrower takes 8 sticks, and wins the game.

The women do not sing at this game, but they chatter and joke continually as the play goes on.

Mr. Grinnell informs me that the specimen figured came from the "Northern Cheyenne Agency, officially known as the Tongue River Agency, in Montana, the Indians living on Rosebud and Tongue rivers, which are tributaries of the Yellowstone from the south. At the same time the southern Cheyennes of Indian Territory have the same game."

CHIPPEWA. Lake Superior Region.

Schoolcraft¹ describes the bowl game of the Chippewa under the name of *puggesaing*.

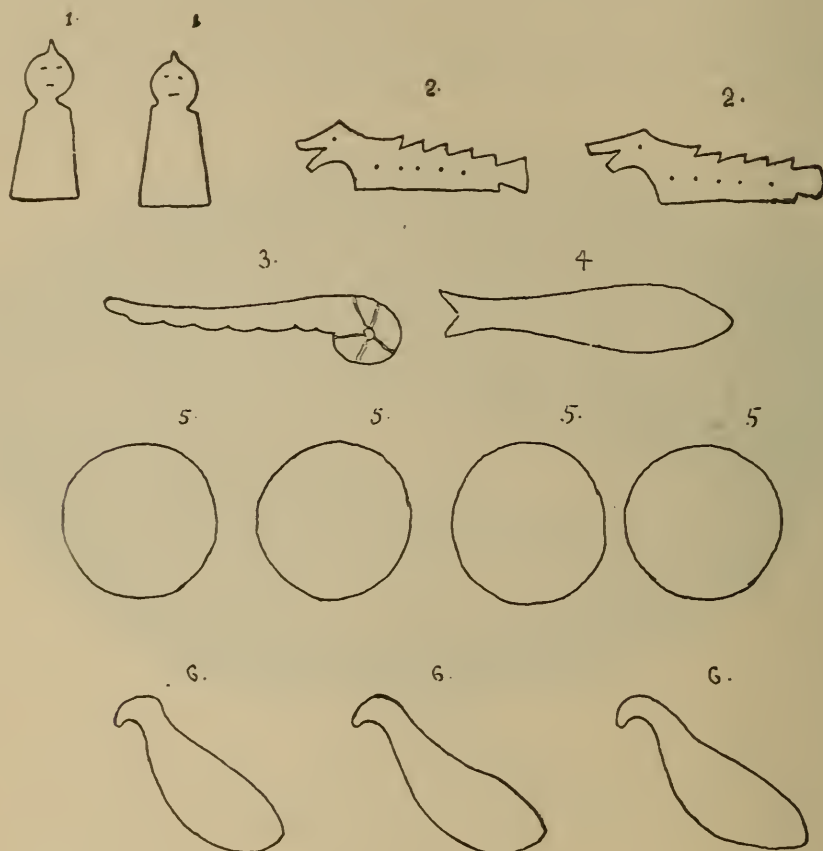


Fig. 16.
DICE FOR BOWL GAME.
Chippewa Indians.
After Schoolcraft.

It is played with thirteen pieces, nine of which are formed of bone and four of brass, all of circular shape (fig. 16). The right side of the eight pieces of bone are stained red, with edges and dots burned black with a hot iron; the reverse is white. The brass pieces have the right side convex and the reverse concave. The convex surface is bright, the concave dark or dull.

The first piece, called *ininees*, or *ogima*, represents a ruler. No. 2 typifies an amphibious monster, and is called *gitchy kinábik*, or the great serpent. No. 3 represents the war club. No. 4 is a fish (*kenozha*). No. 5 are small disks of brass, and No. 6, a duck, *shersheeb*.

¹ Information respecting the history, conditions, and prospects of the Indian tribes of the United States, Philadelphia, 1853, II, p. 72.

The game is won by the red pieces, the arithmetical value of each of which is fixed, and the count, as in all games of chance, is advanced or retarded by the luck of the throw. Nothing is required but a wooden bowl, which is curiously carved and ornamented (the owner relying somewhat on magic influence), and having a plain, smooth surface.

The author gives the counts for sixteen different throws from one hundred and fifty-eight down to two.

Long¹ gives the following description of the bowl game among the Chippewa:

Athtergain, or miss none but catch all, is also a favorite amusement with them, in which the women frequently take part. It is played with a number of hard beans, black and white, one of which has small spots and is called king; they are put into a shallow wooden bowl and shaken alternately by each party, who sit on the ground opposite to one another; whoever is dexterous enough to make the spotted bean jump out of the bowl receives of the adverse party as many beans as there are spots; the rest of the beans do not count for anything.

The following account, given by J. G. Kohl,² who does not designate the particular tribe, probably refers to the Chippewa:

The game called by the Indians *pagessan*, and which I frequently saw played, the Canadians call *le jeu au plat* (the game of the bowl). It is a game of hazard, but skill plays a considerable part in it. It is played with a wooden bowl and a number of small figures bearing some resemblance to our chessmen. They are usually carved very neatly out of bones, wood, or plum stones, and represent various things—a fish, a hand, a door, a man, a canoe, a half-moon, etc. They call these figures *pagessanag* (carved plum stones), and the game has received its name from them. Each figure has a foot on which it can stand upright. They are all thrown into a wooden bowl (in Indian *onagan*), whence the French name is derived. The players make a hole in the ground and thrust the bowl with the figures into it, while giving it a slight shake. The more figures stand upright on the smooth bottom of the bowl through this shake all the better for the player. Each figure has its value, and some of them represent to a certain extent the pieces in the game of chess. There are also other figures, which may similarly be called the pawns. The latter, carved into small round stars, are all alike, have no pedestal, but are red on one side and plain on the other, and are counted as plus or minus according to the side uppermost. With the pawns it is a perfect chance which side is up, but with the pieces much depends on the skill with which the bowl is shaken. The other rules and mode of calculation are said to be very complicated, and the game is played with great attention and passion.

CREE.

In Father Lacombe's Cree dictionary³ we find *jeu de hasard*, *pakessewin*.

ILLINOIS. Illinois.

It would appear from a manuscript Illinois dictionary in the library of Dr. J. Hammond Trumbull⁴ that this tribe was familiar with the game of plum-stones.

¹ J. Long, *Voyages and Travels of an Indian Interpreter*, London, 1791, p. 52.

² Kitchi-Gami, *Wanderings Round Lake Superior*, London, 1860, p. 82.

³ Rév. Père Alb. Lacombe, *Dictionnaire de la langue des Cris*, Montreal, 1874.

⁴ Andrew McFarland Davis, *Indian Games*, *Bulletin of the Essex Institute*, XVIII, p. 187.

MASSACHUSETTS. Massachusetts.

William Wood, in his "New England Prospect,"¹ relates the following:

They have two sorts of games, one called *puim*, the other *hubbub*, not much unlike cards and dice. *Hubbub* is five small bones in a small smooth tray, the bones be like a die but something flatter, black on the one side and white on the other, which they place on the ground, gainst which violently thumping the platter, the bones mount changing colors with the windy whisking of their hands to and fro, which action in that sport they much use, smiting themselves on the breast and thighs, crying out Hub Hub Hub. They may be heard playing this game a quarter of a mile off. The bones being all black or white make a double game; if three of one color and two of another, then they afford but a single game; four of a color and one differing is nothing. So long as the man wins he keeps the tray, but if he lose the next man takes it.



Fig. 17.

GAMBLING BOWL.

Menominee Indians.

After Hoffman.

MENOMINEE. Wisconsin.

Dr. Walter J. Hoffman² describes the Menominee form of the game under the name of *â kqa' siwôk*.

It was frequently played in former times, but of late is rarely seen. It is played for purposes of gambling, either by two individuals or by two sets of players. A hemispheric bowl (fig. 17), made out of the large round nodules of a maple root, is

cut and hollowed out. The bowl is symmetric and is very nicely finished. It measures 13 inches in diameter at the rim, and is 6 inches in depth. It measures $\frac{5}{8}$ inch in thickness at the rim, but gradually increases in thickness toward the bottom, which is about an inch thick. There are forty counters, called *ma'atik*, made of twigs or trimmed sticks of pine or other wood, each about 12 inches long and from $\frac{1}{4}$ to $\frac{1}{2}$ inch thick. Half of these are colored red, the other half black, or perhaps left their natural whitish color.

The dice or *aska'sianok* consists of eight pieces of deer horn, about $\frac{3}{4}$ inch in diameter and $\frac{1}{2}$ inch thick, but thinner toward the edges. Sometimes plum-stones or even pieces of wood are taken, one side of them being colored red, the other side remaining white or uncolored. When the players sit down to play the bowl containing the dice is placed on the ground between the opponents; bets are made; the first player begins a song in which the other players as well as the spectators join. At a certain moment the one to play first strikes the bowl a smart tap, which causes the dice to fly upward from the bottom of the bowl, and as they fall and settle the result is watched with very keen interest. The value represented by the position of the dice represents the number of counters which the player is permitted to take from the ground. The value of the throw is as follows:

First throw, 4 red dice and 4 white, a draw.

Second throw, 5 red dice and 3 white, counts 1.

Third throw, 6 red dice and 2 white, counts 4.

Fourth throw, 7 red dice and 1 white, counts 20.

Fifth throw, 8 red dice and 0 white, counts 40.

The players strike the bowl alternately until one person wins all the counters—both those on the ground and those which the opponent may have won.

¹ London, 1634.

² The Menominee Indians, Fourteenth Annual Report of the Bureau of American Ethnology, p. 241.

MICMAC. Nova Scotia. (Cat. No. 18850, Mus. Arch., Univ. Penn.)

Set of six buttons of vegetable ivory (fig. 18) (actual buttons), about $\frac{7}{8}$ inch in diameter, rounded and unmarked on one side and flat with a dotted cross on the other, being modern substitutes for similar objects of caribou bone. Bowl of wood (fig. 19), nearly flat, $11\frac{1}{2}$ inches in diameter. Fifty-one round counting-sticks (fig. 20), $7\frac{3}{4}$ inches in length, and four counting-sticks (fig. 21), $7\frac{1}{2}$ inches in length. Collected by the donor, Stansbury T. Hager. The following account of the game is given by the collector:¹



Fig. 18.

SET OF BUTTONS FOR DICE IN WÖLTÉS TAKŪN.

Diameter, $\frac{7}{8}$ inch.

Micmac Indians, Nova Scotia.

Cat. No. 18850, Museum of Archaeology, University of Pennsylvania.

A game much in use within the wigwams of the Micmac in former times is that called by some writers *altestakun* or *wöltés takún*. By good native authority it is said that the proper name for it is *wöltéstōmkwōn*. It is a kind of dice



Fig. 19.

WOODEN BOWL FOR WÖLTÉS TAKŪN.

Diameter, $11\frac{1}{2}$ inches.

Micmac Indians, Nova Scotia.

Cat. No. 18850, Museum of Archaeology, University of Pennsylvania.

game of unknown antiquity, undoubtedly of pre-Columbian origin. It is played upon a circular wooden dish—properly rock maple—almost exactly a foot in diameter,

¹ Micmac Customs and Traditions, *The American Anthropologist*, January, 1895, p. 31.

hollowed to a depth of about $\frac{3}{4}$ inch in the center. This dish plays an important rôle in the older legends of the Micmacs. Filled with water and left over night, its appearance next morning serves to reveal hidden knowledge of past, present, and future. It is also said to have been used as a vessel upon an arkite trip. The dice of caribou bone are six in number, having flat faces and rounded sides. One face is plain; the other bears a dotted cross (fig. 18). When all the marked or all the unmarked faces are turned up there is a count of five points; if five marked faces and one unmarked face or five unmarked faces and one marked face are turned up, one point results; if a die falls off the dish there is no count. There are fifty-five counting sticks—fifty-one plain rounded ones about $7\frac{1}{2}$ inches long, a king-pin shaped like the forward half of an arrow, and three notched sticks, each presenting half of the rear end of an arrow. These last four are about 8 inches long. Three of the plain sticks form a count of one point, the notched sticks have a value of five points, while the king-pin varies in value, being used as fifty-second plain stick, except when it stands alone in the general pile; then it has, like the notched sticks, a value of five points. Thus the possible points of the count are seventeen (one-third of fifty-one) on the plain sticks and fifteen (five times three) on the three notched sticks, a total of thirty-two; but by a complex system the count may be extended indefinitely. In playing the game two players sit opposite each other, their legs crossed in a characteristic manner, and the dish, or *woltes*, between them usually placed on a thick piece of leather or cloth. A squaw keeps the score on the

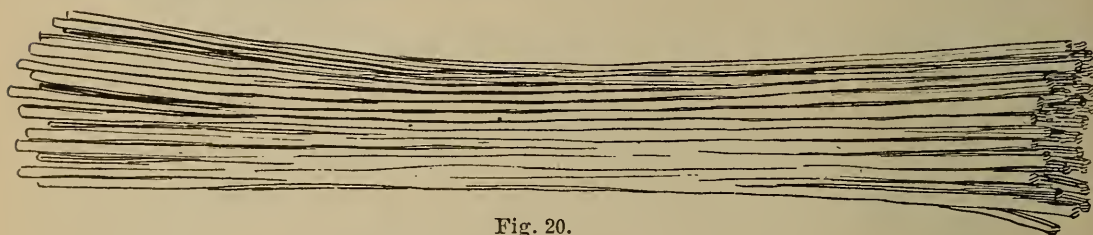


Fig. 20.

COUNTING STICKS FOR WÖLTĚS TAKÛN.

Length, $7\frac{1}{2}$ inches.

Micmac Indians, Nova Scotia.

Cat. No. 18850, Museum of Archaeology, University of Pennsylvania.

counting-sticks, which at first lie together. The six dice are placed on a dish with their marked faces down; one of the players takes the dish in both hands, raises it an inch or two from the ground, and brings it down again with considerable force, thus turning the dice. If all but one of the upturned faces are marked or unmarked,

Mr. Hager informs me that the king-pin is called *kesegoo*—"the old man"—and that the notched sticks are his three wives and the plain sticks his children. The Micmac explains these names by saying that when a stranger calls the children come out of the wigwam first, then the women, and then the head of the family; and this is the way it happens when one plays at *wöltĕstōmkwōn*. "The technical name for the king-pin is *nandaymelyawesch* and for the wives *tkōmoowaal*, both of which names mean, they say, 'it counts five' and 'they count five.' *Nan* is the Micmac for 'five,' but no numeral of which I know appears in the second name." Mr. Hager regards the polygamous element in the game as a good indication of its antiquity, if, he adds, "such indeed be necessary." Referring to the passes described by Mrs. W. W. Brown, in her paper on the games of the Wabanaki Indians (see p. 708), he says: "These passes are made by the Micmac in *wöltĕstōmkwōn* by passing the right hand rapidly to the left over the dish, and shutting it exactly as if catching a fly." Wedding ceremonies among the Micmac were celebrated by the guests for four days thereafter. On the first day they danced the serpent dance, on the second they played football (*tooadijik*), on the third they played *lacrosse* (*madijik*), and on the fourth *wöltĕstōmkwōn*.

he repeats the toss and continues to do so as long as one of these combinations results. When he fails to score, the amount of his winnings is withdrawn from the general pile and forms the nucleus of his private pile. His opponent repeats the

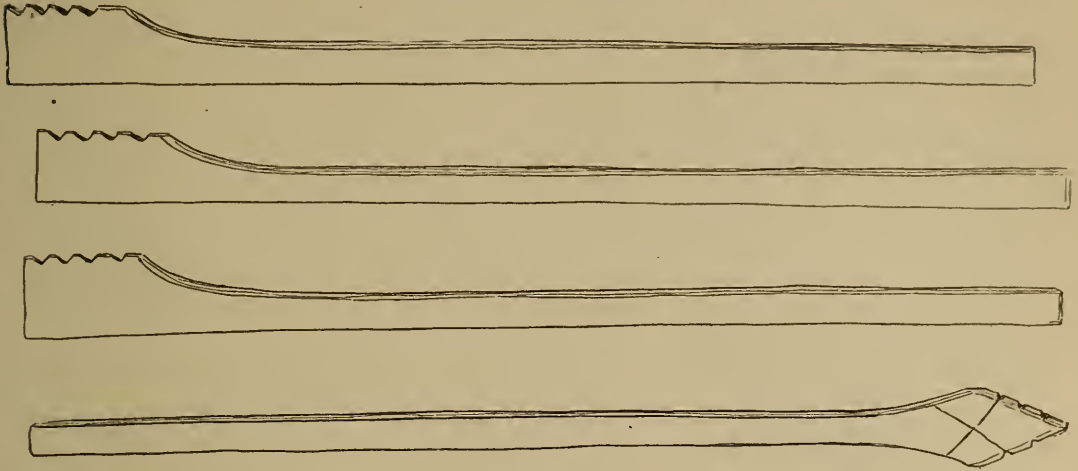


Fig. 21.

COUNTING STICKS FOR WÖLTËS TAKÛN.

Length, $7\frac{1}{2}$ inches.

Micmac Indians, Nova Scotia.

Cat. No. 18850, Museum of Archaeology, University of Pennsylvania.

dice-throwing until he also fails to score. Two successive throws of either a single point or of five points count thrice the amount of one throw; that is, three points or fifteen points, respectively. Three successive throws count five times as much as

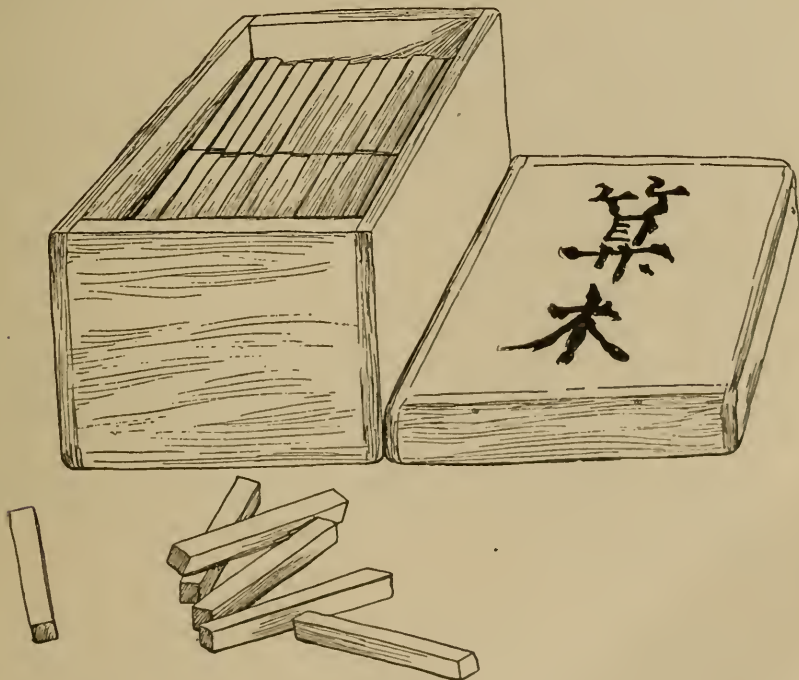


Fig. 22.

COUNTING STICKS (*sangi*).

Length, 2 inches.

Japan.

Cat. No. 18306, Museum of Archaeology, University of Pennsylvania.

a single throw, etc. After the pile of counting-sticks has been exhausted, a new feature is introduced in the count. The player who scores first takes a single plain stick from his pile and places it by itself, with one of its sides facing him to repre-

sent one point, and perpendicular to this, either horizontally or vertically, to represent five points.¹

He continues to add sticks thus as he continues to score. This use of the sticks as counters to indicate unpaid winnings is a device for deferring further settlement until the game seems near its end, and also serves to increase the count indefinitely to meet the indefinite duration of the game, as after one player secures a token his opponent, when he scores, merely reduces the former's pile by the value of his score. The reduction is effected by returning from the token pile to the private pile the amount of the opponent's score; hence at any time the token pile represents the amount of advantage which its owner has obtained since the last settlement. These settlements are made whenever either party may desire it; this, however, is supposed to be whenever a player's token pile seems to represent a value approaching the limit of his opponent's ability to pay. If his opponent should permit the settlement to be deferred until he were no longer able to pay his debts, then he would lose the game to the first player; whereas, if one player after the settlement retains five plain sticks but not more, a new feature is introduced which favors him. If, while retaining his five sticks, he can score five points before his opponent scores at all, he wins the game in spite of the much greater amount of his opponent's winnings up to that point. If his opponent scores one point only before he obtains his five points, he still has a chance, though a less promising one. If, after paying over the three plain sticks that represent a single point two plain sticks still remain to him, he is then compelled to win seven points before his opponent wins one or he forfeits the game; but if he succeeds in winning his seven points, the game is still his. However, in these last chances he is further handicapped by the rule that he can at no time score more points than are represented in his private pile. Consequently, if with only five plain sticks in his possession he could only score a single point, even if his toss should call for five; but with six plain sticks he could score two points; with nine sticks, three, etc. The last chances are: With only five plain sticks, five points are necessary to win; with three sticks, six points; with two sticks, seven points; with one stick, seven points. There are two other minor rules: One, that in counting five points on plain sticks four bundles of four each are given instead of five bundles of three each, as one should expect; total, sixteen. The other rule is that to count six points we use a notched stick plus only two plain sticks, instead of three, as might be expected.

This game may be regarded as an American analogue of the Chinese game of *Chong ün ch'au* (No. 27).

Mr. Hager states that the preceding game was invented and taught by the hero Glooscap. They also have a similar game called *Wöbünärunk*, which, they say, was invented and owned by Mikchikch, the turtle, one of Glooscap's companions, to whose shell the dice bear some resemblance.² The name *Wöbünärunk* is derived from *wöbün*, meaning dawn; to which is added a termination signifying anything molded or worked upon by human hands.³

¹This system of scoring is identical with that used in Japan with the counting-sticks, or *sangi* (Chinese, *sün muk*). One is indicated by a stick arranged vertically, and five by a stick placed horizontally. A set of *sangi* in the University Museum (Cat. No. 18306) (fig. 22), consists of one hundred and twenty-seven little wooden blocks, $1\frac{1}{2}$ inches in length, and about $\frac{1}{4}$ inch square in section. *Sangi* are, or rather were employed in Japan in the higher mathematics, the use of the *soroban* or abacus not being customary with scholars.

²The account of *Wöbünärunk* is from an unpublished manuscript by Mr. Hager, which he courteously placed in my hands.

³From the fact that white shell beads (wampum) are constantly referred to as being used as stakes, not only among the tribes of the Atlantic coast but in the

The outfit for the game consists simply of six dice, made from moose or caribou bone, though one Micmac at least is positive that the teeth only of these animals can properly be used. In playing, these dice are thrown from the right hand upon the ground and the points are counted according to the number of marked or unmarked faces which fall uppermost. It is customary for a player to pass his hand quickly over the dice, if possible, after he has tossed them and before they reach the ground, in order to secure good luck. The shape of the dice is that of a decidedly flattened hemisphere, the curved portion being unmarked. The base or flat surface is about the size of a 25-cent piece and presents three figures (fig. 23). Close to its edge there is a circle, touched at four points by a series of looped curves, which form a kind of cross. Within each of the four spaces thus separated is an equal-armed cross composed of nine dots, which, with the dot in the center of the die, make a total of thirty-seven dots upon each piece, or of two hundred and twenty-two dots (37 by 6) used in the game.¹

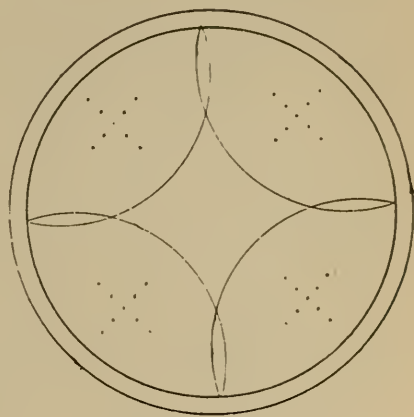


Fig. 23.

GAMING DISK FOR WÖBŪNĀRUNK.

Diameter, $1\frac{3}{4}$ inches.

Micmac Indians, Nova Scotia.

From a drawing by Stansbury Hager.

Southwest (see Cushing's account of the white shell beads used in *Sho'-li-we*), the writer is inclined to believe that the name of this same *Wöbünārunk* is derived from the use of wampum (*wobun*, "white," so called from the white beads), as stakes for which it was played. Again, it may refer to the white disks; but, however this may be, a peculiar significance is attached to the use of shell beads as gambling counters or stakes. In the Chinese game of *Fán t'án* the stakes are represented by specially made white and black counters, known as white and black "pearls."

"In view of the numerical suggestiveness of dots and of the presence of that peculiar repetition of numbers which characterizes all triple multiples of the key number thirty-seven, it may be worthy of note that the number of dots included in the seven counts of the game is seven hundred and seventy-seven. The Micmac language contains native words for numbers as great as a million, and, as Dr. Rand says, is capable of indefinite numerical extension, a fact which surely appears to involve some knowledge of the properties of numbers. That certain numbers have been used as symbols in ritual and myth is quite as unquestionable among the Micmacs as among so many tribes and peoples, primitive and otherwise. The importance of such dice games in developing and extending the knowledge of numbers is self-evident. As to the figures upon the dice, the use of the cross from prehistoric times as a native symbol throughout the length and breadth of the Americas is too well known to justify further comment. The Micmacs painted it upon their canoes and wigwams and attributed to it marvelous efficacy as a healing power. To play either *Wöltöstomkwön* or *Wöbünārunk* with dice from which the cross is omitted would be certain, they believed, to bring dire misfortune upon all participants. Several Micmacs have related to me, almost word for word, the same legend of the origin of the cross among them that was reported by Pere Leclercq at Gaspé more than two centuries ago; and it is noticeable that this legend contains no Christian element. They also associated this symbol with the four quarters into which they divided the land for the purpose of collecting medicinal roots and herbs, while a circle represents to them either that of their wigwam or of the horizon. The flat surface of the die, therefore, with its four crosses and surrounding circle, may symbolize the world-

The count is as follows:

If 6 marked faces fall face up, 50 points.

If 5 marked faces fall face up, 5 points.

If 4 marked faces fall face up, 4 points.

If 3 marked faces fall face up, 3 points.

If 2 marked faces fall face up, 2 points.

If 1 marked face falls face up, 1 point.

If 6 unmarked faces fall face up, 5 points.

Total, 7 counts and 70 points.

The marks on the Micmac dice are similar to those on some of the inscribed shell beads known as *runtees*, found in the State of New York. One of these (fig. 24), (reproduced from Prof. W. H. Holmes's *Art in Shell of the Ancient Americans*),¹ is from an ancient village site at Pompey, which Rev. W. M. Beauchamp, of Baldwinsville, New York, attributes to the seventeenth century. Mr. Beauchamp writes me that both sides are alike, and that it is pierced with two holes from edge to edge.

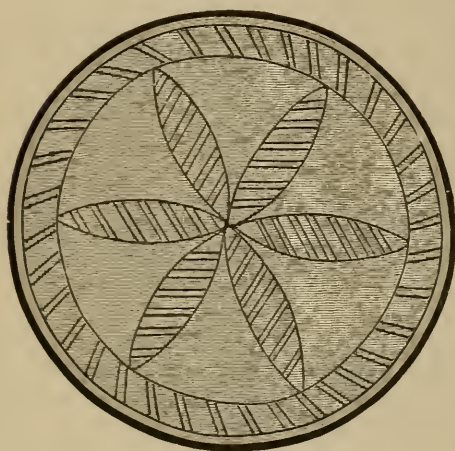


Fig. 24.

ENGRAVED SHELL BEAD (*runtee*).

Pompey, New York.

MICMAC. New Brunswick, Canada.
(Cat. No. 20125, Mus. Arch., Univ. Penn.)

Set of six disks of caribou bone marked on the flat side (fig. 25); a platter of curly maple cut across the grain, 11½ inches in diameter, and fifty-two wooden counting sticks about 8 inches in length (fig. 26), four being much broader than the others and of different shapes, as shown in the figure. Collected and deposited by Mr. George E. Starr, who purchased the game from

a woman named Susan Perley, a member of a tribe calling themselves the Tobique, at an Indian village half a mile north of Andover, New Brunswick. Three of the disks and the counting sticks were made for the collector, while the platter and three of the disks shown in the upper row (fig. 25) are old. Two of the latter are made apparently of old bone

wide concept of the four earth regions encircled by the horizon line and beneath the curve of the sky represented by the curved surface. The looped figure may extend the fourfold division to the sky, or it may be merely a combination of the two other symbols. At least, that each design had some particular meaning can hardly be questioned, for the Micmac still objects to playing the game if one be incorrectly drawn. A comparison of the two Micmac dice games shows the same number of dice in each and the cross and circle appear on both sets, although in slightly differing size and design. The dice of one game are, however, never used in the other. Their counts differ radically, save that the ubiquitous number seven is prominent in both, and finally *Wöbünärunk* lacks altogether the bow-and-arrow elements and their mystic attributes. Still, the resemblance is sufficiently close to suggest a possible unity of origin." (S. H.)

¹ Report of the Bureau of Ethnology, 1881, plate xxxiv, fig. 4.

buttons, there being a hole on the reverse in which the shank fitted. The designs on the faces are not the same. The woman informed Mr. Starr that the game was called *Āltes tāgen*, and that it was played by two persons, one of whom places the counting sticks in a pile together. Then the stones are placed at random in the plate, which is held in both hands and struck sharply on the ground so as to make the stones fly in the air and turn before landing in the plate again. A player continues as long as he scores, taking counters from the pile of sticks according to his throw. When the pile is exhausted, each having obtained part, the game is continued until one wins them all. Three plain sticks count one point. The three carved sticks each count four points,

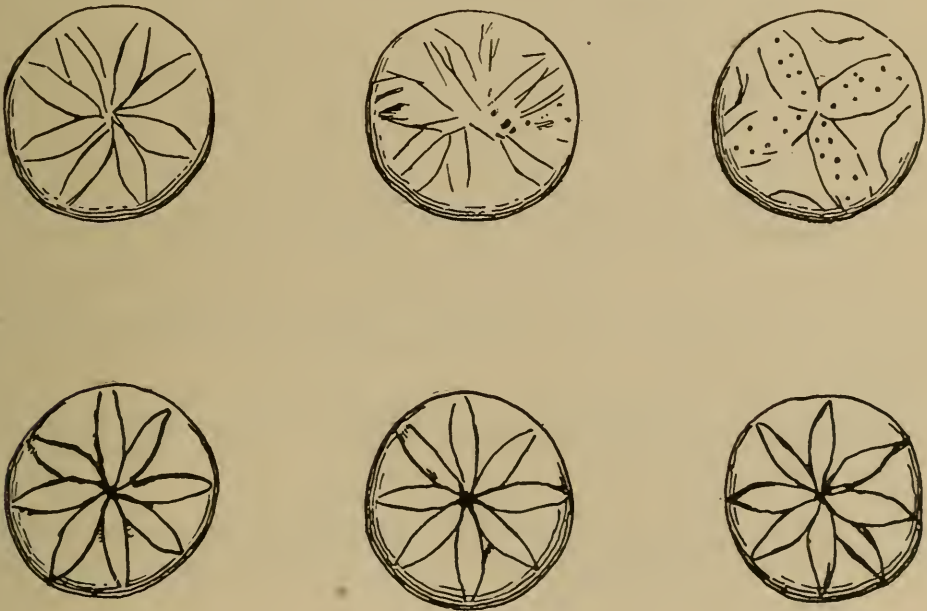


Fig. 25.

BONE GAMING DISKS.

Diameter, 1 inch.

Tobique (Micmac) Indians, New Brunswick.

Cat. No. 20125, Museum Archaeology, University of Pennsylvania.

or twelve plain sticks. The snake-like stick is kept to the last, and equals three plain sticks, and a throw that counts three is necessary to take it.

MICMAC. New Brunswick. (Cat. No. 50804, Peabody Museum.)

Set of six dice made of antler, $\frac{3}{4}$ to $\frac{7}{8}$ inch in diameter, marked on flat side with six-rayed star; bowl of birch wood, $11\frac{1}{4}$ inches in diameter, and fifty-four counting sticks (fig. 27), consisting of fifty plain sticks and four larger sticks. The latter comprise one stick with three serrations on side near one end, two each with four serrations, and one resembling the feathered shaftment of an arrow with three serrations on either side. Collected by Mr. G. M. West.

MICMAC. Hampton, New Brunswick. (Cat. No. 50792, Peabody Museum.)

Five dice of antler, $\frac{3}{4}$ to $\frac{7}{8}$ inch in diameter, marked on flat side with four-rayed star; bowl of birch wood, $9\frac{1}{8}$ inches in diameter, and fifty-two

counting sticks consisting of forty-eight plain sticks and four larger sticks. The latter comprise one stick with five serrations on one side near one end, two, each with four serrations, and one resembling feathered arrow shaftment with serrations on each side. The counting sticks in this and the preceding game are in part of bamboo.

It will be subsequently shown that the greater part of the objects used as dice, canes, blocks, bones and beaver teeth, in the games of this series can be directly traced to cane arrows and the *atlatl* or throwing stick. While such a connection can not be established for the engraved

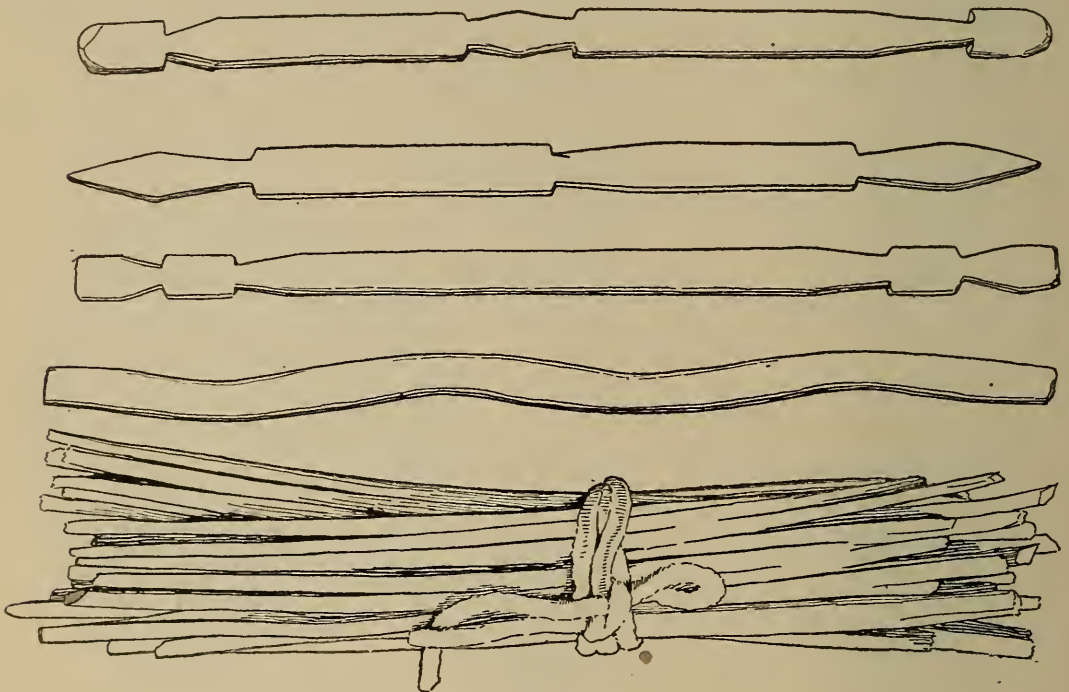


Fig. 26.

COUNTING STICKS FOR ALTAS TAGEN.

Length, about 8 inches.

Micmac Indians, New Brunswick.

Cat. No. 20125, Museum Archaeology, University of Pennsylvania.

bone disks of the Micmac, the three arrows and *atlatl* appear in the counting sticks (fig. 21). In some sets (as fig. 31) the *atlatl* appears replaced by a bow or serpent-like object.

NARRAGANSETT. Rhode Island.

Roger Williams, in his "Key into the Language of America,"¹ describes the games of the Narragansett as of two sorts—private and public. "They have a kinde of dice which are Plumb stones painted, which they cast in a Tray with a mighty noyse and sweating." He gives the following words referring to this game: *Wunnaugonhómmín*, "to

¹ London, 1643; Collections of the Rhode Island Historical Society, I, Providence, 1827; also, Collections of the Massachusetts Historical Society, for the year 1794, III, p. 324. Cited by Andrew McFarland Davis, Indian Games, Bulletin of the Essex Institute, XVIII, p. 173, to whom I am indebted for the reference.

play at dice in their Tray;" *Asaúanash*, "the painted plumb stones with which they throw;" and *Puttuckquapuonck*, "A playing Arbour." He describes the latter as made of long poles set in the earth, four square, 16 or 20 feet high, on which they hang great store of their stringed money, having great staking, town against town, and two chosen out of the rest by course to play the game at this kind of dice in the midst of all their abettors, with great shouting and solemnity. He also says:

The chief gamesters among them much desire to make their gods side with them in their games; therefore I have seen them keep as a precious stone a piece of thunderbolt, which is like unto a crystal, which they dig out of the ground under some tree thunder smitten, and from this stone they have an opinion of success.

NIPISSING. Forty miles above Montreal, Canada.

Mr. J. A. Cuoq¹ describes the plum stone game among this tribe under the name of *Pakesanak*, which he says is the usual name given to five plum-stones, each marked with several dots on one side only. Four or five women squatting around a blanket make the stones jump about the height of their forehead, and according to their falling on one or the other side the fate of the player is decided. Of late the game has been improved by using a platter instead of a cover (blanket), which caused the name of the "game of platter" to be given it by the whites.

The name *pakesanak* is the plural of *pakesan*, defined as *noyan*, *jeu*. Dr. A. S. Gatschet has kindly given me the following analysis of this word: *pake* = to fall, to let fall, *s* = diminutive, *an* = suffix of inanimate nouns.

NORRIDGEWOCK. Norridgewock, Maine.

In the Dictionary of Father Sebastian Rasles,² a number of words³ referring to games are defined,⁴ from which it appears that the Norridgewock Indians played a game with a bowl and eight disks (*ronds*), counting with *grains*. The disks were black on one side and white on the other. If black and white turned up four and four, or five and

¹ Lexique de la Langue Algonquine, Montreal, 1886.

² Memoirs American Academy of Science and Arts, new series, I, Cambridge, 1833.

³ Je joue avec des ronds blancs d'un côté et noirs de l'autre, *nederakké*, v. *nedäimké*, v. *nedasé' aüinar*.

Les ronds, *éssé' šáinar*; les grains, *tagšssak*.

Les grains du jeu du plat, dicuntur étiam, *ésséšáinar*.

Lors qu'ils s'en trouve du nombre de 8, 5 blancs et 3 noirs, v. 5 noirs et 3 blancs, *nebarham*, *keb*, etc. (on ne tire rien); idem fit de 4 blancs et 4 noirs.

Lors qu'il y en a 6 d'une couleur, et 2 de l'autre, *nemesšdam*, (on tire 4 grains).

Lors qu'il y en a 7 d'une même couleur, et qu'un de l'autre, *nedénéši* (on en tire 10).

Lors qu'ils sont tous 8 de même couleur, *nsrihara* (on en tire 20).

Nesákasi, je plante un bois dans terre p'r marquer les parties.

Je lui gagne une partie, je mets un bois p'r, etc., *negšdagšharaii*.

Nedasahamañkš, il me démarque une partie, il ôte un bois, etc.

Je joue au plat, *nsäüradéháma* 3. *Säü mé*.

Mets les petits ronds, etc., *pšné ésséšáinar*.

Nederakébena, je les mets.

⁴ Indian Games, Bulletin of the Essex Institute, XVIII, p. 187.

three, there was no count; six and two counted four; seven and one, ten; and all eight of the same color, twenty. Davis remarks that "according to Rasles, the count was sometimes kept by thrusting

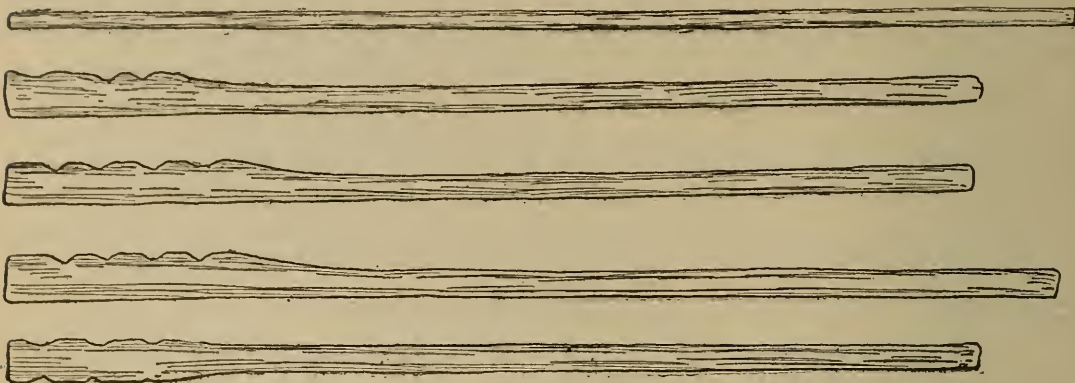


Fig. 27.

COUNTING STICKS.

Length, 8 to 8½ inches.

Micmac Indians, New Brunswick.

Cat. No. 50804, Peabody Museum of American Archaeology.

sticks into the ground. This is shown by Indian words used in the games which Rasles interprets respectively: 'I thrust a stick in the ground to mark the games;' 'I win a game from him; I place a stick,' etc.; 'He takes the mark for a game away from me; he removes a stick,' etc.; 'He takes away all my marks; he removes them all,' etc.

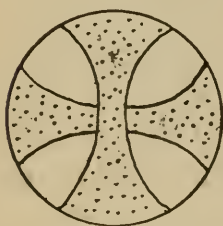


Fig. 28.

BONE DIE USED IN BOWL
GAME (*all tes-teg-enük*).Passamaquoddy Indians,
Maine.

After drawing by Mrs. W. W. Brown.

OJIBWA.

Tanner¹ describes the game as follows, under the name of *Bug-ga-sank* or *Beg-ga-sah*:

The *beg-ga-sah-nuk* are small pieces of wood, bone, or sometimes of brass, made by cutting up an old kettle. One side they stain or color black, the other they aim to have bright. These may vary in number, but can never be fewer than nine. They are put together in a large wooden bowl or tray kept for the purpose. The two parties, sometimes twenty or thirty, sit down opposite to each other or in a circle. The play consists in striking the edge of the bowl

in such a manner as to throw all the *beg-ga-sah-nuk* into the air, and on the manner in which they fall into the tray depends his gain or loss. If his stroke has been to a certain extent fortunate, the player strikes again and again, as in the game of billiards, until he misses, when it passes to the next.

The Rev. Peter Jones² says:

In these bowl plays they use plum-stones. One side is burnt black and the other is left its natural color. Seven of these plums are placed in a wooden bowl and are then tossed up and caught. If they happen to turn up all white, or all black, they count so many. This is altogether a chance game.

¹A Narrative of the Captivity and Adventures of John Tanner, New York, 1830, p. 114.

²History of the Ojibwa Indians, London, 1861, p. 135.

PASSAMAQUODDY. Maine.

The bowl game among these Indians is described by Mrs. W. W. Brown,¹ of Calais, Maine, under the name of *All-tes teg-enŭk*.



Fig. 29.

MANNER OF HOLDING DISH IN ALL-TES-TEG-ENŬK.

Passamaquoddy Indians, Maine.

After Mrs. W. W. Brown.

It is played by two persons kneeling, a folded blanket between them serving as a cushion on which to strike the shallow wooden dish, named *wal-tah-hā-mo'g'n*. This dish contains six thin bone disks (fig. 28), about $\frac{3}{4}$ inch in diameter, carved and colored on one side and plain on the other. These are tossed or turned over by holding

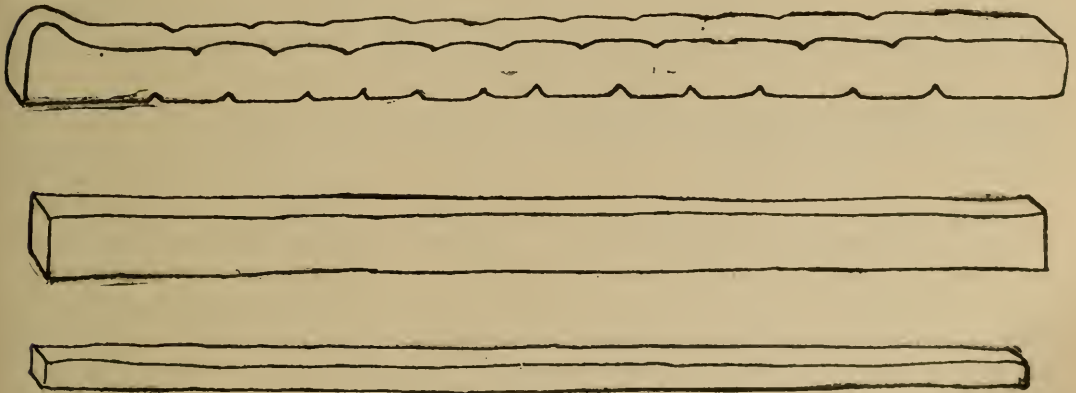


Fig. 30.

COUNTING STICKS.

Length, $6\frac{1}{2}$ to $6\frac{3}{4}$ inches.

Passamaquoddy Indians, Maine.

From sketch by Mrs. W. W. Brown.

the dish firmly in the hands and striking down hard on the cushion (fig. 29). For counting in this game there are forty-eight small sticks, almost 5 inches in length, named *ha-gă-ta-mā-g'n'al*; four somewhat larger, named *t'k'm-way-wāl*, and one notched, called *non-ā-da-ma-wuch* (fig. 30).

¹Some Indoor and Outdoor Games of the Wabanaki Indians, Trans. Roy. Soc. Canada, Sec. II, 1888, p. 41.

All the sticks are placed in a pile. The disks are put in the dish without order; each contestant can play while he wins, but, on his missing, the other takes the dish. Turning all the disks but one, the player takes three small sticks; twice in succession, nine sticks; three times in succession, one big stick or twelve small ones. Turning all alike once, he takes a big stick; twice in succession three big ones, or two, and lays a small one out to show what is done; three times in succession he stands a big stick up—equal to sixteen small ones from the opponent—the notched one to be the last taken of the small ones, it being equal to three.

When all the small sticks are drawn and there are large ones left in the pile, instead of taking three from the opponent the players lay one out to show that the other owes three sticks, and so on until the large ones are won. Then, unless the game is a draw, the second and more interesting stage begins, and the sticks have different value. Turning all the disks but one, the player lays out one, equal to four from an opponent. Turning all the disks but one, twice in succession, he lays three

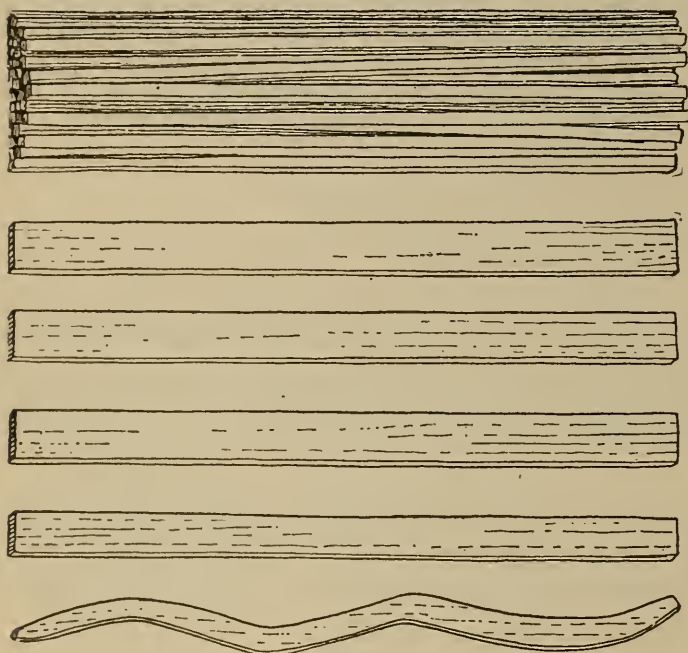


Fig. 31.

SET OF COUNTING STICKS FOR WER-LAR-DA-HAR MUN GUN.

Penobscot Indians, Maine.

Cat. No. 16551, Museum of Archaeology, University of Pennsylvania.

out, equal to twelve from the other—three times in succession—stands one up, equal to one large or sixteen small ones. Turning all alike, he sets up one large one, twice in succession; then three large ones or, lacking these, three small ones for each large one. This would end the game if the opponent had none standing, as there would be no sticks to pay the points. But a run of three times of one kind in succession is unusual. When one has not enough sticks to pay points won by the other, comes the real test of skill, although the former has still several superior chances to win the game. If he has five sticks, he has three chances; if seven or nine sticks, he has five

chances—that is, he places the disks in position, all one side up, for each of the tosses; the other contestant takes his turn at playing, but can not place the disks. Then giving the dish a peculiar slide, which they call *la luk*, or “running down hill like water,” and at the same time striking it down on the cushion, he may, unless the luck is sadly against him, win twice out of three times trying.

To this day it is played with great animation, with incantations for good luck and exorcising of evil spirits, by waving of hands and crying *yon-tel-eg-wa-wüch*. At a run of ill luck there are peculiar passes made over the dish and a muttering of *Mic-mac-squs ñk n'me hā-ook* (“I know there is a Micmac squaw around”).

One of their legends tells of a game played by Youth against Old Age. The old man had much *m'ta-ou-lin* (magic power). He had regained his youth several times by inhaling the breath of youthful opponents. He had again grown old and sought another victim. When he found one whom he thought suited to his purpose, he invited him to a game of *All-tes-teg-enñk*. The young man was also a *m'ta-ou-lin*, and for a *pō-he-gan* had *K'che-bal-lock* (spirit of the air) and, consequently, knew the old man's intention, yet he consented to a game. The old man's *wāl-tah-hā-mo'g'n*

was a skull, and the *ăll-tes-teg-enŭk* were the eyes of former victims. The game was a long and exciting one, but at each toss off by the young man the disks were carried a little higher by his *pō-he-gan* until they disappeared altogether. This broke up a game that has never been completed. The legend says that the old man still waits and the young man still outwits him.

Another Passamaquoddy game is described by Mrs. Brown under the name of *Wy-pen-og-enŭk*.

This game, like *All-tes-teg-enŭk*, has long been a gambling game. The disks are very similar, but larger, and eight in number. The players stand opposite each other with a blanket spread on the ground between them. The disks are held in the palm of the hand, and "chucked" on the blanket. This game is counted with sticks, the contestants determining the number of points necessary to win before commencing to play.

PENOBSCOT. "Oldtown Indians," Maine. (Cat. No. 16551, Mus. Arch., Univ. Penn.)

Set of counting-sticks of unpainted white wood (fig. 31), copied at the Chicago Exposition by a Penobscot Indian from those in a set of gaming implements consisting of dice, counters and bowl, there ex-

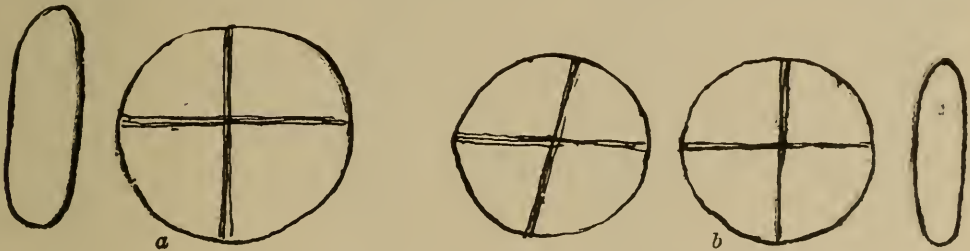


Fig. 32.

LIMESTONE DISKS, POSSIBLY USED IN GAME.

a, 1 inch in diameter; *b*, $\frac{7}{8}$ inch in diameter.

Nottawasaga, Ontario, Canada.

Archaeological Museum, Toronto, Canada.

hibited by the late Chief Joseph Nicolai of Oldtown. The latter furnished the writer with the following account of the game under the name of *Wer-lar-da-har mun gun*.

The buttons used as dice in this game are made from the shoulder blade of a moose; the counters of cedar wood. The latter are fifty-five in number, fifty-one being rounded splints about 6 inches in length, three flat splints of the same length, and one made in a zigzag shape. A soft bed is made in the ground, or on the floor, for the dish to strike on. Two persons having been selected to play the game, they seat themselves opposite to each other. The buttons are placed in the dish and it is tossed up and brought down hard upon its soft bed. If five of the six buttons have the same side up, the player takes three round splints, but if the entire six turn the same side up, it is called a double, and the player takes one of the flat ones. The game is continued until all the counters are drawn.

It might naturally be inferred that remains of the bone disks used in the bowl game would be found in our archaeological museums, but as yet I have not met with any. On the other hand small disks of pottery and of stone frequently marked on one face are not uncommon, and are usually classified as gaming implements. I am indebted to Mr. David Boyle, curator of the Archaeological Museum, Toronto, for the sketch, fig. 32 *a* representing a small disk of soft white limestone

from his collection, engraved with a cross on one side, fig. 32 *b* representing a similar disk with a cross on both sides.

SIKSIKA (Blackfeet). Canada.

Rev. Edward F. Wilson¹ says:

Their chief amusements are horse racing and gambling. For the latter of these they employ dice of their own construction—little cubes of wood, with signs instead of numbers marked upon them. These they shake together in a wooden dish.

Mr. J. W. Tims² gives *katsásinni* as a general term for gambling.

Mr. George Bird Grinnell has furnished me with the following unpublished account of the stave game among the Blackfeet, which he describes under the name of *O nes teh*, "The stick or travois³ game."

This is a woman's gambling game, in vogue among the tribes of the Blackfoot nation, who know nothing of the basket or seed game so generally played by the more southern plains tribes.

Four straight bones—made from buffalo ribs—6 or 8 inches long, $\frac{1}{4}$ inch thick, and about $\frac{3}{4}$ inch wide, and tapering gradually to a blunt point at either end, are used in playing it (Plate 5). Three of these bones are unmarked on one side, and the fourth on this side has three or five transverse grooves running about it at its middle, or sometimes no grooves are cut and the bone is marked by having a buckskin string tied around it. On their other sides the bones are marked, two of them by zigzag lines, running from one end to the other; another, called the chief, has thirteen equally distant holes drilled in, but not through it, from one end to the other. The fourth, called "four," from its four depressions or holes, has four transverse grooves close to each end, and within these is divided into four equal spaces by three sets of transverse grooves of three each. In the middle of each of these spaces a circular depression or hole is cut. All the lines, grooves, and marks are painted in red, blue, or black.

These bones are played with, either by two women who gamble against each other or by a number of women who sit opposite and facing each other in two long lines, each player contesting with her opposite neighbor. Twelve sticks, or counters, are used in the game, and at first these are placed on the ground between the two players.

The player, kneeling or squatting on the ground, grasps the four bones in the right or left hand, holding them vertically with the ends resting on the ground. With a slight sliding motion she scatters the bones on the ground close in front of her, and the sides which fall uppermost express the count or the failure to count. Sometimes, but not always, the players throw the bones to determine which shall have the first throw in the game.

The person making a successful throw takes from the heap of sticks the number called for by the points of the throw—one stick for each point. So long as the throw is one which counts the player continues to throw, but if she fails to count the bones are passed over to the opposite player, and she then throws until she has cast a blank. When the sticks have all been taken from the pile on the ground between them the successful thrower begins to take from her opponent so many of the sticks which she has gained as are called for by her throw. As twelve points

¹ Report on the Blackfoot tribes, Report of the fifty-seventh meeting of British Association for the Advancement of Science, Manchester, 1887, London, 1888, p. 192.

² Grammar and Dictionary of the Blackfoot Language, London, 1889.

³ The word *travois* (trapper, French) has been variously explained as coming from *travail* and from *traineau*. I believe, however, as stated in *The Story of the Indian*, p. 156, it is a corruption from *travers* or *à travers*, meaning across, and referring to the crossing of the poles over the horse's or over the dog's withers (G. B. G.).



STAVES FOR TRAVOIS GAME.
Blackfeet Indians, Blackfeet Agency, Montana.
Collection of George Bird Grinnell.

must be made by a player before the twelve sticks can come into her possession and the game be won, it will be seen that the contest may be long drawn out. A run of luck is needed to finish it.

Some of the counts made by the throws are here given:

3 blanks and chief	=	6 points =	6 sticks.
3 blanks and chief reversed	=	3 points =	3 sticks.
2 zigzag, 1, 4, and chief	=	4 points =	4 sticks.
2 blanks, 1, 4, and chief	=	2 points =	2 sticks.
2 blanks, 1 zigzag, and chief	=	zero point =	zero sticks.
2 blanks, 1 zigzag, and chief reverses	=	zero point =	zero sticks.
1 zigzag, 1 blank, 1, 4, and chief	=	zero point =	zero sticks.

The women do not sing at this game as the men do at the gambling game of "hands."

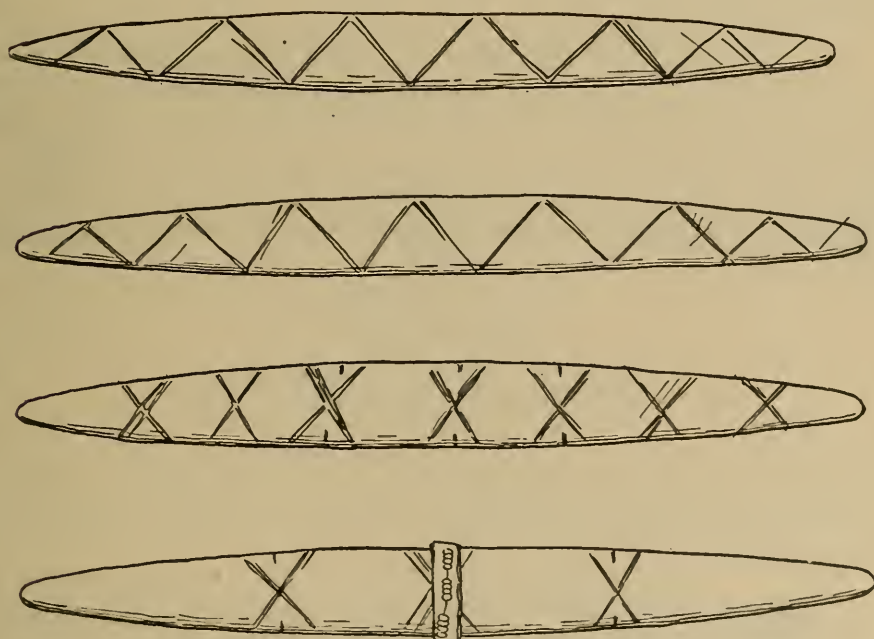


Fig. 33.

SET OF BONE GAMING STAVES.

Length, $5\frac{1}{4}$ inches.

Blackfeet, South Piegan Reserve, Montana.

Cat. No. 51693, Field Columbian Museum.

The game described was obtained by Mr. Grinnell from the Piegans of the Blackfeet Agency in northwestern Montana, on the eastern flanks of the Rocky Mountains. They live on Milk River, Cut Bank, Willow, Two Medicine Lodge, and Badger creeks; the southernmost tribe of the Blackfeet. It will be observed that the implements for this game are practically identical with those collected by Dr. Matthews from the Gros Ventres in Dakota (fig. 89). Concerning this Mr. Grinnell remarks:

The Gros Ventres of Dakota—by which are meant, of course, the Gros Ventres of the village, a tribe of Crow stock—are not very distant neighbors of the Blackfeet, and in fact the people of the old Fort Berthold village, the Gros Ventres, Rees, and Mandans, have many customs, and even some traditions, which closely resemble those of the Blackfeet.

BLACKFEET. South Piegan Reserve, Montana. (Cat. No. 51693, Field Columbian Museum, Chicago.)

Set of four bone staves, made of rib bones, $5\frac{1}{4}$ inches in length and $\frac{1}{2}$ inch wide in the middle, tapering to the ends. The outer rounded sides are cut with lines, which are filled with red paint, as shown in fig. 33. Two are alike, and one of the others is banded with a narrow thong of buckskin on which are sewn twelve small blue glass beads. The reverses, which show the texture of the bone, are alike, and painted red.

Accompanied by twelve counting sticks (fig. 34) made of twigs, $5\frac{1}{2}$ inches in length, smeared with red paint.

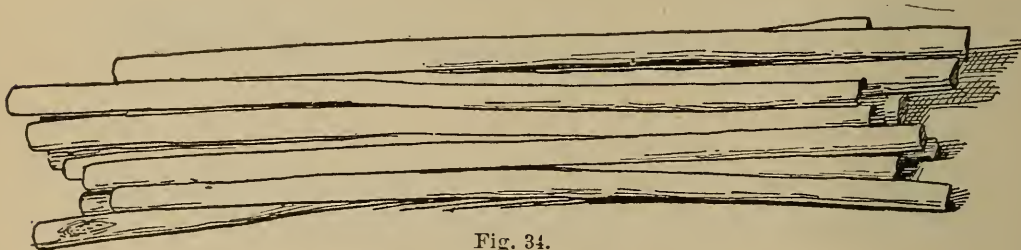


Fig. 34.

SET OF COUNTING STICKS.

Length, $5\frac{1}{2}$ inches.

Blackfeet, South Piegan Reserve, Montana.

Cat. No. 51693, Field Columbian Museum.

BLACKFEET. Blood Reserve, Alberta, Canada. (Cat. No. 51654, Field Columbian Museum, Chicago.)

Three bone staves, $6\frac{3}{8}$ inches in length and $\frac{5}{8}$ inch in width in the middle, tapering to the ends. The outer rounded sides are carved as shown in fig. 35, two alike, in which the incised lines are filled with red paint, and one with holes, 10—3 3—9, which are painted blue. The inner sides, which show the texture of the bone, are perfectly plain.

Both of the above sets were collected by Dr. George A. Dorsey, of the Field Columbian Museum, who courteously gives me the following particulars:

I am informed that the Bloods generally use three instead of four bones. They call the game *Nitsitaiep-sktpsepian* = we play. The stick marked with holes is called "man" and the other two "snakes." Of the counts I have only this much:

All marked faces up	=4.
All unmarked faces up	=4.
2 unmarked and "snake" up	=6.
1 unmarked and 2 snakes up	=6.
1 unmarked, snake and man up	=0.

ATHAPASCAN STOCK.

WHITE MOUNTAIN APACHE. Arizona. (Cat. No. 152696, U.S.N.M.)

Set of three sticks of hazel wood, 8 inches in length, $\frac{3}{4}$ inch wide, and about $\frac{3}{8}$ in thickness. Flat on one side, with diagonal black band

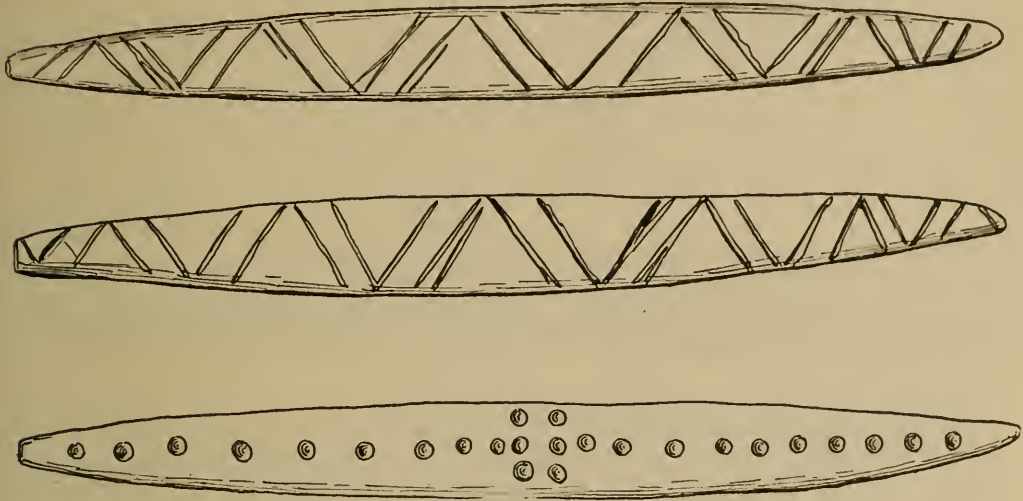


Fig. 35.

SET OF BONE GAMING STAVES.

Length, $6\frac{3}{8}$ inches.

Blackfeet, Blood Reserve, Alberta, Canada.

Cat. No. 51654, Field Columbian Museum.

across middle; other rounded and unpainted. Show marks of use. Collected by Mr. Edward Palmer.¹ Described as played by women

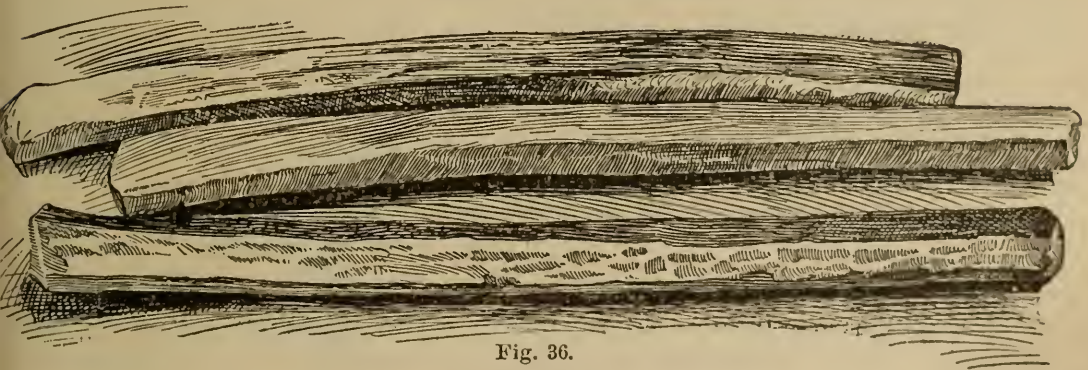


Fig. 36.

GAMING STAVES.

Length, $9\frac{1}{2}$ inches.

White Mountain Apache, Fort Apache, Arizona.

Cat. No. 18619, Museum of Archaeology, University of Pennsylvania.

upon a circle² of forty stones divided in four tens with a division to each ten (fig. 37), and having a large flat rock placed in the middle. Four

¹A set of sticks (fig. 36) made of a variety of the prickly ash, $9\frac{1}{2}$ inches in length, but otherwise identical with the above, are contained in the Museum of Archaeology of the University of Pennsylvania (Cat. No. 18619), collected by Capt. C. N. B. Macauley, U. S. A.

²Mr. Palmer says a square; Captain Macauley a circle.

or six can play. Two sides are formed of equal numbers, and two sets of sticks are used. The players kneel behind the rock square. The first player takes the sticks in one hand, rounded sides out (fig. 38), and slams them end first, on the rock. From this is derived the name of the game *Sé-tich-ch*, "Hit" or "bounce-on-the-rock."¹

The counts are as follows:

3 round sides up	= 10
3 flat sides up	= 5
2 round sides up and one flat	= 3
1 round side up and two flat	= 2

A throw of ten gives another throw. Each side has two sticks which are used to mark the count. The two sides count from opposite directions.

NAVAJO. New Mexico. (Cat. No. 9557, U.S.N.M.)

Set of three sticks of root of cotton wood, 8 inches in length, about $1\frac{3}{4}$ in breadth and $\frac{1}{2}$ in thickness, one side flat and blackened; the other rounded and unpainted (fig. 39). One stick tied near end to prevent splitting. They show marks of continued use. Collected by Mr. Edward Palmer.

As observed by the writer at the Columbian Exposition in Chicago, the Navajo play upon a circle of forty stones, throwing the staves ends down upon a flat stone placed in the center. Each player has a splint or twig to represent him upon the board, and these are all placed together at one of the four openings in the circle at the commencement of the game. The throws count as follows:

3 round sides up	= 10
3 flat	= 5
2 rounds and one flat	=
1 round and two flat	=

The following vocabulary of the game was furnished me by the Navajo at Chicago:

Game, *set tilth*.
 Staves, *set tilth*.
 Circle of stones, *sen asti*.
 Stone in center, *a cle sane*.

Dr. Washington Matthews² describes

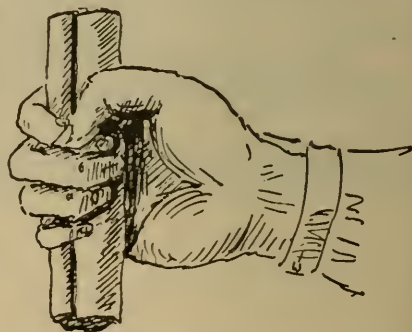


Fig. 38.

METHOD OF HOLDING STICKS BY WHITE MOUNTAIN APACHE.

From a drawing by the late Capt. C. N. B. Macauley, United States Army.

¹ Capt. John G. Bourke gave the Apache name of this game to the writer as *Tze-chis* or *Zse-tilth*, the two words, "stone" and "wood" referring to the central stone and the staves. The circle of stones is called, he stated, *Tze-nasti*, "stone circle." Mr. Edward Palmer gives the name of the game as *Satill*.

² Navajo Legends, Boston, 1897, note 47, p. 219.

a game played by Navajo women under the name of *Tsč d'í'l* or *tsín-d'í'l*:¹

The principal implements are three sticks, which are thrown violently, ends down, on a flat stone around which the gamblers sit. The sticks rebound so well that they would fly far away were not a blanket stretched overhead to throw them back to the players. A number of small stones placed in the form of a square are used as counters. These are not moved, but sticks, whose positions are changed according to the fortunes of the game, are placed between them. The rules of the game have not been recorded.

Dr. Matthews² tells, among the early events of the fifth or present world, that while they were waiting for the ground to dry, the women erected four poles, on which they stretched a deerskin, and under the

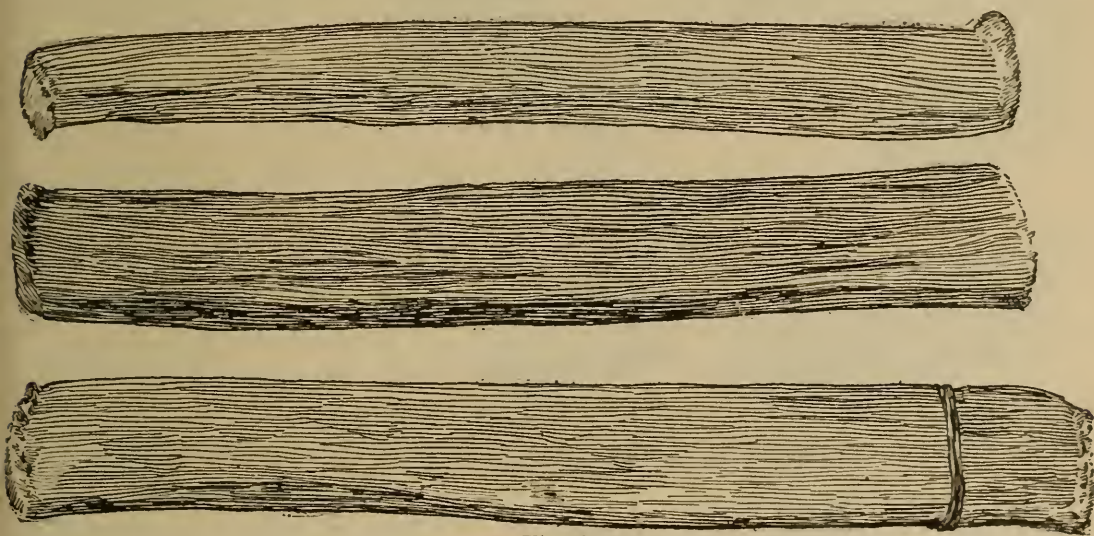


Fig. 39.

SET OF STAVES FOR GAME.

Length, 8 inches.

Navajo Indians, New Mexico.

Cat. No. 9557, U.S.N.M.

shelter of this they played the game of three sticks, *tsíndí*, one of the four games which they brought with them from the lower world.³

Another game of tossed sticks described by Dr. Matthews⁴ was called *taká-thad-sáta*,⁵ or the thirteen chips.

It is played with 13 thin flat pieces of wood, which are colored red on one side and left white or uncolored on the other. Success depends on the number of chips which, being thrown upward, fall with their white sides up.

¹ *Tsín* = wood, *d'í'l*?

² Navajo Origin Legend, The Story of the Emergence, II (see p. 185).

³ The other games were: *dilkon*, played with two sticks, each the length of an arm; *atsá*, played with forked sticks and a ring, and *aspí'n*.

⁴ Navajo Legends, p. 83.

⁵ *Taká-thad-sáta* was the first of four games played by the young *Hastséhogan* with the gambling god *Nohoilpi*. These four games are not the same as the four described as brought from the under world. They comprise, in addition, *nánzoz*, "hoop and pole;" *tsí'nbelsil*, or push on the wood, in which the contestants push on a tree until it is torn from its roots and falls, and *tsol*, or ball, the object in which was to hit the ball so that it would fall beyond a certain line. Compare the gambling episode with that of *Póshaiyänne*, the Sia culture hero and the Magician. The four games played by them were not the same (see p. 730).

NAVAJO. Arizona. (Cat. No. 74735, U.S.N.M.)

Set of seven blocks of cedar wood, $\frac{3}{4}$ inch in length, $\frac{7}{16}$ inch wide, and $\frac{1}{4}$ inch thick (fig. 40). Section hemispherical. Six have flat sides blackened and one painted red; opposite unpainted. Collected by Dr. Washington Matthews, U. S. A. The game was "played with counters by women." These blocks furnish an exact parallel to the Korean "chestnut" *nyout*.

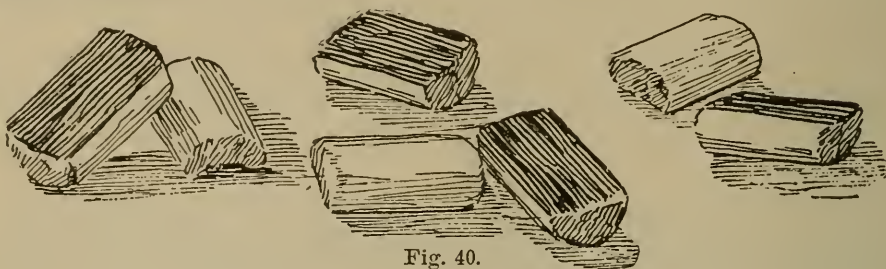


Fig. 40.

SET OF BLOCKS FOR GAME.

Length, $\frac{3}{4}$ inch.

Navajo Indians, Arizona.

Cat. No. 74735, U.S.N.M.

BEOTHUKAN STOCK.

BEOTHUK. Newfoundland.

From colored drawings of ancient bone disks, attributed to the Beothuk, and presented to the United States National Museum by Lady Edith Blake, of Kingston, Jamaica, it would appear that this tribe may have used gaming disks resembling those of the Micmac.

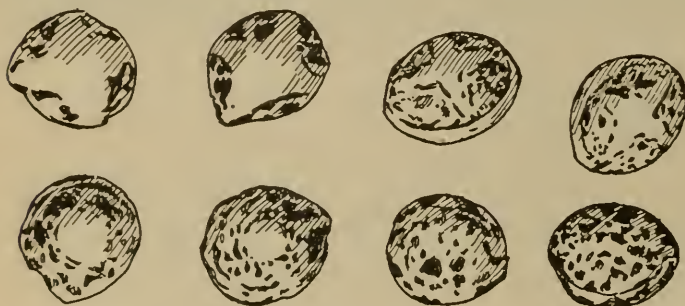


Fig. 41.

SET OF PLUM STONES FOR GAME.

Diameter, $\frac{1}{16}$ inch.

Arikara Indians.

Cat. No. 6355, U.S.N.M.

CADDON STOCK.

ARIKARA. (Cat. Nos. 6342, 6355, U.S.N.M.)

Set of eight plum stones, plain on one side, and marks burned upon the other, as shown in fig. 41. Four have stars on burned ground; two, circular

marks, and two are entirely burned over. Basket of woven grass, 7 inches in diameter at top, and 2 inches deep. Collected by Dr. Gray and Mr. Matthew F. Stevenson.

Brackenridge,¹ referring to the Arikara, states:

In the evening, about sundown, the women cease from their labors and collect into little knots, and amuse themselves with a game something like jackstones. Five pebbles are tossed up in a small basket, with which they endeavor to catch them again as they fall.

¹ H. M. Brackenridge, Views of Louisiana, together with a Journal of a voyage up the Missouri River in 1811, Pittsburg, 1814.

It seems hardly necessary to point out that he failed to comprehend the object of the game.

PAWNEE.

In reply to a letter addressed by the writer to Mr. George Bird Grinnell, of New York City, he kindly wrote the following account "of what the Pawnee call the seed game:"

I have seen this game played among the Pawnee, Arikara, and Cheyenne, and substantially in the same way everywhere. The Pawnee do not use a bowl to throw the seeds, but hold them in a flat wicker basket, about the size and shape of an ordinary tea plate. The woman who makes the throw holds the basket in front of her close to the ground; gives the stones a sudden toss into the air, and then moves the basket smartly down against the ground, and the stones fall into it. They are not thrown high, but the movement of the basket is quick, and it is brought down hard on the ground so that the sound of the slapping is easily heard. The plum stones are always five in number, blackened, and variously marked on one side. The women who are gambling sit in line opposite to one another, and usually each woman bets with the one sitting opposite her, and the points are counted by sticks placed on the ground between them, the wager always being on the game, and not on the different throws. It is exclusively, so far as I know, a woman's game.

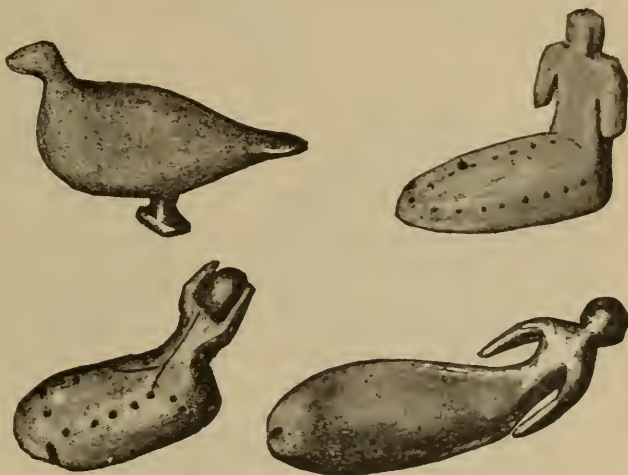


Fig. 42.

IVORY IMAGES USED AS DICE IN GAME OF TINGMIUJANG.

Central Eskimo.

From Sixth Annual Report of the Bureau of Ethnology.

Pike¹ says:

The third game alluded to is that of *la platte*, described by various travelers (as the platter or dish game); this is played by the women, children, and old men, who, like grasshoppers, crawl out to the circus to bask in the sun, probably covered only with an old buffalo robe.

ESKIMAUAN STOCK.

Speaking of the Central Eskimo, Dr. Franz Boas² says:

A game similar to dice, called *tingmiujang*, i. e., images of birds, is frequently played. A set of about fifteen figures, like those represented in fig. 42, belong to this game; some representing birds, others men and women. The players sit around a board or a piece of leather and the figures are shaken in the hand and thrown upward. On falling, some stand upright, others lie flat on the back or on the side. Those standing upright belong to that player whom they face; sometimes they are so thrown that they all belong to the one that tossed them up. The players throw by turns until the last figure is taken up, the one getting the greatest number of figures being the winner.

¹ Elliott Coues, The Expedition of Zebulon Montgomery Pike, New York, 1895, p. 534.

² The Central Eskimo, Sixth Annual Report of the Bureau of Ethnology, Washington, 1888, p. 567.

Mr. John Murdoch¹ describes similar objects which he purchased at Plover Bay, eastern Siberia, in 1881 (fig. 43). They were supposed to be merely works of art. Referring to the account given by Dr. Boas of their use as a game, he says:

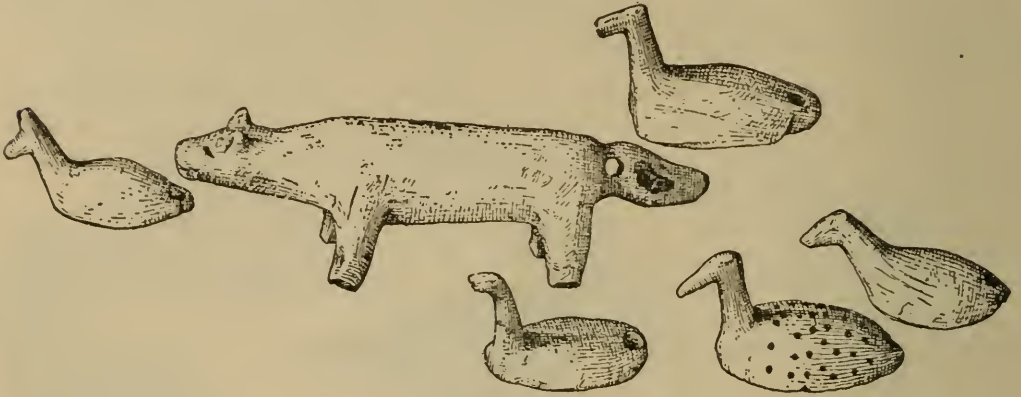


Fig. 43.

GAME (?) OF FOX AND GEESE.

After Murdoch.

It is therefore quite likely they were used for a similar purpose at Plover Bay. If this be so, it is a remarkable point of similarity between these widely separated Eskimo, for I can learn nothing of a similar custom at any intermediate point.

Mr. Murdoch refers to the game as mentioned by Captain Hall,² who, speaking of the Central Eskimo, says:

They have a variety of games of their own. In one of these they use a number of bits of ivory made in the form of ducks.

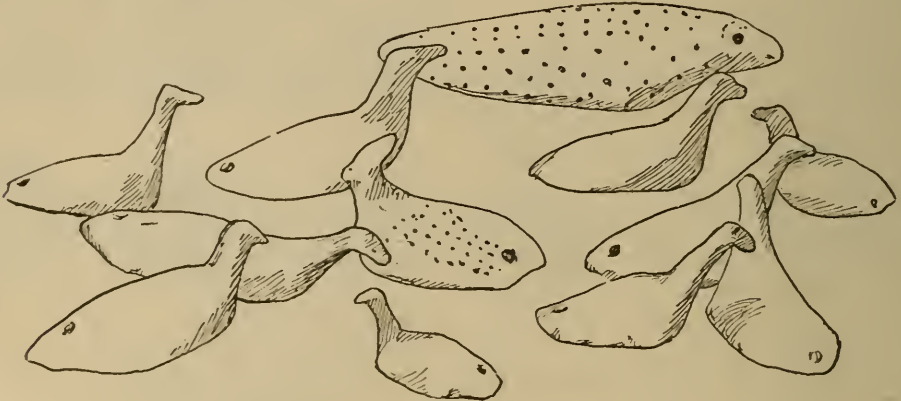


Fig. 44.

CARVED IVORY WATER BIRDS AND SEAL.

St. Lawrence Island, Siberia.

Cat. No. 63457, U.S.N.M.

In the United States National Museum (Cat. No. 63457) there is a set of carved water birds and a seal (fig. 44), collected from the Eskimo at St. Lawrence Island, Alaska, by Mr. E. W. Nelson, in 1882. He informs me, through Prof. Otis T. Mason, that he never saw the flat-

¹ Ethnological Results of the Port Barrow Expedition, Ninth Annual Report of the Bureau of Ethnology, Washington, 1892, p. 361.

² Charles Francis Hall, Arctic Researches, New York, 1860, p. 570.

bottomed geese and other creatures used in a game, and all of his specimens are perforated and used as pendants on the bottom of personal ornaments and parts of clothing.

Prof. Benjamin Sharp, of the Academy of Natural Science, tells me that he saw the carved water birds used as a game, being tossed and allowed to fall by Eskimo of St. Lawrence Bay, Siberia.

In reply to my inquiry in reference to the use of such objects in games by the Arctic Highlanders of Greenland, Mr. Henry G. Bryant writes me that small images of birds are rare among them, although



Fig. 45.

WOODEN BLOCKS, SAID TO BE USED IN GAME.

Length, $1\frac{7}{8}$ inches.

Northwest Arctic Coast.

Cat. No. 7404, U.S.N.M.

representations of men, women, walrus, seal, bears, and dogs are part of the domestic outfit of every well-regulated family.¹

I understand that the leg bones of the arctic fox are sometimes tied together on a string, and at times these are thrown up and their position noted when striking the ground.

Mr. Bryant adds:

Perhaps they attach a significance to the position of the fox bones, which may be analogous to the practice of using wooden or bone dice by other tribes.

A set of carved ivory tablets (figs. 195-200), strung upon a thong, are described as among the properties of an Eskimo shaman in

¹ Mr. Bryant states that these miniature figures, which are made of ivory, are employed to teach children the arts of the chase.

Alaska. It is possible that they are used in the same manner as the fox bones.

In the United States National Museum (Cat. No. 7404) are four wooden blocks, said to be used in a game, from the Northwest Arctic Coast. These blocks (fig. 45), which were collected by Mr. R. Kennicott, have a rounded base marked with two transverse cuts. They are perforated as if for stringing. From the locality given they are probably Eskimauan.

In conclusion, reference should be made to a game described by Murdoch¹ among the Point Barrow Eskimo with twisters and marline spikes used for backing the bow.

Lieutenant Ray says he has seen it played with any bits of stick or bone. According to him the players are divided into sides, who sit on the ground about 3 yards apart, each side sticking up one of the marline spikes for a mark to throw the twisters at. Six of the latter, he believes, make a complete set. One side tosses the whole set, one at a time, at the opposite stake, and the points which they make are counted up by their opponents from the position of the twisters as they fall. He did not learn how the points were reckoned, except that twisters with a mark on

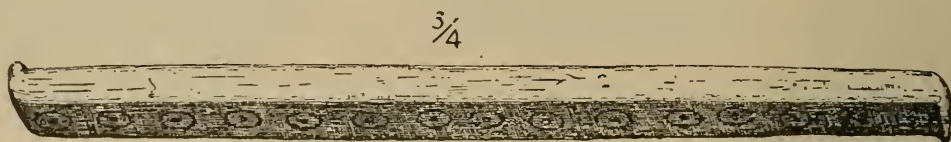


Fig. 46.

TWISTERS USED IN GAME.

Length, $5\frac{3}{8}$ inches.

Point Barrow Eskimo.

After Murdoch.

them counted differently from the plain ones, or how long the game lasted, each side taking its turn of casting at the opposite stake. He, however, got the impression that the winning side kept the twisters belonging to their opponents. Mr. Nelson informs me that a similar game is played with the same implements at Norton Sound.

The present writer has repeated this account, from the general likeness of the implements (sinew twisters) (fig. 46) to the staves tossed as dice, rather from any clearly apparent identity of the games.

IROQUOIAN STOCK.

CHEROKEE. North Carolina.

I am informed by Mrs. Starr Hayes that the Cherokee play a game in a flat square basket of cane like the lid of a market basket, with colored beans, under the name of "Black eye and white eye." The shallow basket used is $1\frac{1}{2}$ feet square. The beans are colored "butter beans," a variety of lima, and those selected are dark on one side and white on the other. Twelve beans are kept as counters. Six others are put in the basket, as they come, and the players, who are four in number, and each two partners, play in turn. The basket is held in

¹ Ninth Annual Report of the Bureau of Ethnology, p. 364.

both hands, slightly shaken, and then with a jerk, the beans are tossed in the air. If all turn black, two are taken from the counters; if all turn white, three are taken. If but one turns up white, one is taken from the twelve. When they turn five white, one only is taken. The game is played three or six times weekly. Whoever gets twelve beans has the game.

DELAWARE.

See account by Loskiel on page 725.

HURON. Ontario, Canada.

Charlevoix¹ gives the following account:

As I returned through a quarter of the Huron village I saw a company of these savages, who appeared very eager at play. I drew near and saw they were playing at the game of the dish (*jeu du plat*). This is the game of which these people are fondest. At this they sometimes lose their rest, and in some measure their reason. At this game they hazard all they possess, and many do not leave off till they are almost stripped quite naked and till they have lost all they have in their cabins. Some have been known to stake their liberty for a time, which fully proves their passion for this game; for there are no men in the world more jealous of their liberty than the savages.

The game of the dish, which they also call the game of the little bones (*jeu des osselets*), is only played by two persons. Each has six or eight little bones, which at first I took for apricot-stones; they are of that shape and bigness. But upon viewing them closely I perceived they had six unequal surfaces, the two principal of which are painted, one black and the other white, inclined to yellow. They make them jump up by striking the ground or the table with a round and hollow dish, which contains them and which they twirl round first. When they have no dish they throw the bones up in the air with their hands; if in falling they come all of one color, he who plays wins five. The game is forty up, and they subtract the numbers gained by the adverse party. Five bones of the same color win but one for the first time, but the second time they win the game. A less number wins nothing.

He that wins the game continues playing. The loser gives his place to another, who is named by the markers of his side; for they make the parties at first, and often the whole village is concerned in the game. Oftentimes also one village plays against another. Each party chooses a marker; but he withdraws when he pleases, which never happens but when his party loses. At every throw, especially if it happens to be decisive, they make great shouts. The players appear like people possessed, and the spectators are not more calm. They all make a thousand contortions, talk to the bones, load the spirits of the adverse party with imprecations, and the whole village echoes with howlings. If all this does not recover their luck, the losers may put off the party to the next day. It costs them only a small treat to the company. Then they prepare to return to the engagement. Each invokes his genius, and throws some tobacco in the fire to his honor. They ask him above all things for lucky dreams. As soon as day appears they go again to play; but if the losers fancy the goods in their cabins made them unlucky the first thing they do is to change them all. The great parties commonly last five or six days, and often continue all night. In the meantime, as all the persons present, at least those who are concerned in the game, are in agitation that deprives them of reason, as they quarrel and fight, which never happens among savages but on these occasions and in drunkenness, one may judge if when they have done playing they do not want rest.

¹ P. de Charlevoix, *Journal d'un Voyage dans l'Amerique Septentrionale*, Paris, 1744, III, p. 259 (Juin, 1721).

It sometimes happens that these parties of play are made by order of the physician or at the request of the sick. There needs for this purpose no more than a dream of one or the other. This dream is always taken for the order of some spirit, and they prepare themselves for the game with a great deal of care. They assemble for several nights to try and to see who has the luckiest hand. They consult their genii, they fast, the married persons observe continence, and all to obtain a favorable dream. Every morning they relate what dreams they have had and of all the things they have dreamt of which they think lucky and they make a collection of all and put them into little bags which they carry about with them, and if anyone has the reputation of being lucky—that is, in the opinion of these people, of having a familiar spirit more powerful or more inclined to do good—they never fail to make him keep near him who holds the dish. They even go a great way sometimes to fetch him, and if through age or any infirmity he can not walk, they will carry him on their shoulders.

They have often pressed the missionaries to be present at these games, as they believe their guardian genii are the most powerful.

Brebeuf¹ describes the game as follows:

The game is also in great repute as a medicine, especially if the sick has dreamed of it. This game is a game of chance, pure and simple. They take six prune stones, white on one side and black on the other, put them in a plate, and shake the latter violently, so that the bones fall to the ground, showing one or the other side, as it may happen. The game is to get either all with the black side or all with the white side up. Generally they play village pitted against village. They all convene in a hut, and take places on benches ranged along the sides. The sick is carried in a coverlet, and the one who is to shake the plate (there is only one player for each side) walks after the sick, head and face wrapped in his robe. As soon as the player of the opposing party takes hold of the plate they cry aloud, *Achine achine, achine, trois, trois, trois*, or rather, *ioio, ioio, ioio*, desiring that either three white or three black be thrown by him. This winter you would have seen a good many returning to their village, having lost their breeches at a time when there was nearly 3 feet of snow, as frolicsome as if they had won. What I find the most remarkable thing about it is the preliminary arrangements. Some of them fast several days before the game is to take place. The evening before they convene in a hut, and by a ceremony try to find out the result of the game. The one who is chosen to hold the plate takes the stones, puts them in the plate, which he covers, so that nobody can touch them. After this they sing. After the song the plate is uncovered, and the stones are either all black or all white.

Thereupon I asked a savage whether the opposing party did not do the same, and whether they could not get the stones arranged in the same way. He answered "Yes." "Nevertheless," I said, "both can not win," which he did not know how to answer. He told me, further, two remarkable things:

1. They choose for holding the plate someone who had dreamed that he won or who had a charm. Generally those who have one do not make a secret of it, but carry it about with them. They say that one person in our village rubs the stones with a certain ointment and never fails to win.

2. In making the trial some of the stones disappear and are found after a time in the plate with the others.

Father Lalemant² relates the following:

One of the latest foolish things which has happened in this village was occasioned by a sick person in one of the neighboring villages, who, in order to regain his health, dreamed or really got the prescription of the local medicine man that a "game of platter" should be played for him. He spoke about it to the headmen,

¹ Relations des Jesuites, Relation en l'Année, 1636, Quebec, 1858, p. 113.

² *Idem.*, 1639, p. 95.

who soon convened the council and decided upon the date and the village which should be invited for this purpose, and this village was ours. A deputation was sent thence here to make the proposition, which was agreed upon, and then the necessary preparations were made by both parties.

This "game of platter" consists in tossing about in a wooden dish several wild-plum pits, each being white on one side and black on the other, from which follows gain or loss, according to the rules of the game.

It is beyond my power to describe properly the earnestness and activity displayed by our Barbarians in getting ready and in seeking all means and signs of good luck and success in their game. They meet at night and pass part of it in shaking the plate to see who is the most adroit, and part in spreading out their charms and exhorting them. Toward the end they all sleep in the same cabin, having previously fasted and abstained for some time from their wives, all this to have a lucky dream, and the next morning they tell what has happened in the night. Finally, everything that they have dreamed could bring them good luck is collected and placed in bags for carrying. Besides this, they search everywhere for those who have charms affecting the game, or "Ascandies" or familiar spirits to assist the one who holds the dish, and be nearest him when he shakes it. If there are any old men whose presence is recognized as efficacious in increasing the strength and value of their charms, not content with carrying their charms, they load them on the shoulders of the young men in order to carry them to the place of assembly. As we pass in the country for powerful sorcerers, they do not fail to give us notice to pray and perform many ceremonies to cause them to win.

As soon as they arrive at their appointed place, each party ranges itself along one or the other side of the cabin, filling it from top to bottom, under and above the "andichons," which are of bark and made like a bed canopy or roof, corresponding to that below, fastened to the ground upon which they sleep at night. They place themselves upon the poles that lie and are suspended along the length of the cabin. The two players are in the middle with their seconds who hold the charms. Everyone present bets with someone else whatever he pleases, and the game begins.

It is at this moment that everyone sets to praying or muttering I know not what words, with gestures and violent agitations of the hands, eyes, and the entire face, all for the purpose of attracting good fortune to themselves and exhorting their particular spirits to take courage and not let themselves be worried. Some are appointed to utter execrations and make contrary gestures for the purpose of foreing bad luck upon the other side and frightening the familiar spirits of the opposing party.

This game was played several times this winter throughout all the country, but I do not know how it happened that the villages where we have missions were always unlucky to the last degree, and a certain village lost 30 porcelain (wampum) collars each of 1,000 beads, which is in this country, as if we said in France, 50,000 pearls or *pistoles*.¹ But this is not all. Always hoping to regain what they have lost, they bet tobacco bags, clothes, shoes, and breeches, in a word, all they possess, so that, if they are unlucky, as happened to these people, they return home stark-naked, having lost even their breech-clouts.

Nicolas Perrott² says:

The savages have also a sort of game of dice, the box of which is a wooden plate, well rounded and well polished on both sides. The dice are made of six small flat

¹The term *pistole* was used only as a money of account. It was generally equivalent to 10 *livres tournois*. The *livre tournois* was of 20 *sous*, in distinction from the *livre* of Paris of 25 *sous*. What the actual value would be no one can tell. It may be said that 50,000 *pistoles* was equal to 500,000 *livres tournois* at that time. (Personal letter from Prof. Dana C. Munro.)

²Memoire sur les Moeurs, Costumes et Religion des Sauvages de l'Amerique Septentrionale, Leipzig et Paris, 1864, p. 50.

pieces of bone, about the size of a plum stone. They are all alike, having one of the faces colored black, red, green, or blue, and the other generally painted white or any different color from the first-mentioned face. They throw these dice in the plate, holding the two edges, and on lifting it they make them jump and turn therein. After having struck the dish on the cloth, they strike themselves at the same time heavy blows on the chest and shoulders while the dice turn about, crying "Dice! Dice! Dice!" until the dice have stopped moving. When they find five or six showing the same color, they take the grains which have been agreed upon with the opposite party. If the loser and his comrades have nothing more to play with, the winner takes all that is on the game. Entire villages have been seen gambling away their possessions, one against the other, on this game, and ruining themselves thereat. They also challenge to a decision by one throw of the die, and when it happens that a party throws six, all those of the tribe that bet on him get up and dance in cadence to the noise of gourd rattles. All passes without dispute. The women and girls also play this game, but they often use eight dice and do not use a dicebox like the men. They only use a blanket, and throw them on with the hand.

Sagard Theodat¹ says:

The men are addicted not only to the game of reeds (which they call "Aefeara," with three or four hundred small white reeds, cut equally to a length of a foot), but also addicted to other kinds of game, as for instance, taking a large wooden platter with five or six plum stones or small balls, somewhat flattened, about the size of the end of the little finger, or painted black on one side and white on the other. They squat all around in a circle and take each his turn in taking hold of the platter with both hands, which they keep at a little distance from the floor, and bring the platter down somewhat roughly, so as to make the balls move about; they take it as in a game of dice, observing on which side the stones lie, whether it goes against them or for them. The one who holds the platter says, continually while striking it, "Tet, tet, tet," thinking that this may excite and influence the game in his favor.

For the ordinary game of women and girls (at times joined by men and boys) are used five or six stones (as those of apricots) black on one side and yellow on the other, which they hold in their hands as we do dice, throwing the stones a little upward, and after they have fallen on the skin which serves them as a carpet, they see what the result is, and continue to play for the necklaces, ear ornaments, and other small articles of their companions, but never for gold or silver coin, because they do not know the use of it, so that in trade they barter one thing for another.

I must not forget to mention that in some of their villages they play, which we call in France, *Porter les Momons* (carry the challenge). They send a challenge to other villages to come and play against them, winning their utensils, if they can, and meanwhile the feasting does not stop, because at the least inducement the kettle is on the fire, especially in winter time, at which time they especially feast and amuse themselves in order to pass agreeably the hard season.

HURON (Wyandot).

Col. James Smith² describes the Wyandot as "playing a game resembling dice or hustle-cap. They put a number of plum-stones in a small bowl; one side of each stone is black and the other white; then they shake or hustle the bowl, calling *hits, hits, hits, honesey,*

¹ Histoire du Canada, Paris, 1866, p. 243.

² An account of the Remarkable Occurrences in the Life and Travels of Col. James Smith during his Captivity with the Indians in the years 1755-1759, Cincinnati, 1870, p. 46.

honesey, rago, rago; which signifies calling for white or black, or what they wish to turn up; then they turn the bowl and count the whites and blacks."

IROQUOIS. Western Pennsylvania and southern New York.

Loskiel¹ gives the following account:

The Indians are naturally given to gambling, and frequently risk their arms, furniture, clothes, and all they possess to gratify this passion. The chief game of the Iroquois and Delawares is dice, which indeed originated with them. The dice are made of oval and flattish plum-stones, painted black on one and yellow on the other side. Two persons only can play at one time. They put the dice into a dish, which is raised alternately by each gambler and struck on the table or floor with force enough to make the dice rise and change their position; when he who has the greater number of winning color counts five, and the first who has the good fortune to do this eight times wins the game. The spectators seem in great agitation during the game, and at every chance that appears decisive cry out with great vehemence. The gamblers distort their features, and if unsuccessful mutter their displeasure at the dice and the evil spirits who prevent their good fortune. Sometimes whole townships, and even whole tribes, play against each other. One of the missionaries happened to be present when two Iroquois townships, having got together a number of goods, consisting of blankets, cloth, shirts, linen, etc., gambled for them. The game lasted eight days. They assembled every day, and every inhabitant of each township tossed the dice once. This being done, and the chance of each person noted down, they parted for the day. But each township offered a sacrifice in the evening to insure success to their party. This was done by a man going several times around a fire, throwing tobacco into it, and singing a song. Afterwards the whole company danced. When the appointed time for the game was at an end they compared notes, and the winner bore away the spoil in triumph.

MOHAWK. New York.

Bruyas² in his radical words of the Mohawk language, written in the latter part of the seventeenth century, gives under *Atnenha*, "Noyau" (stone of a fruit), the compounds *TSatnenhaSinneton*, "jouer avec les noyaux comme sont les femmes, en les jettant la main," and *TSatennaSeron*, "y jouer au plat."

ONONDAGA. New York.

Rev. W. M. Beauchamp³ states:

Among the Onondaga now eight bones or stones are used, black on one side and white on the other. They term the game *Ta-you-nyun-wát-hah* or, "Finger Shaker," and from one hundred to three hundred beans form the pool, as may be agreed. With them it is also a household game. In playing this the pieces are raised in the hand and scattered, the desired result being indifferently white or black. Essentially the counting does not differ from that given by Morgan (see p. 726). Two white or two black will have six of one color, and these count two beans, called *O-yú-ha*, or the Bird. The player proceeds until he loses, when his opponent takes his turn. Seven white or black gain four beans, called *O-u'ó-sah*, or Pumpkin. All white or all black gain twenty, called *O-hén-tah*, or a Field. These are all that draw anything, and we may indifferently say with the Onondaga, two white or black

¹ George Henry Loskiel, *History of the United Brethren*, London, 1794, I, p. 106.

² Rev. Jacques Bruyas, *Radices verborum Iroquæorum*, New York, 1863. Cited by Andrew McFarland Davis, *Bulletin of the Essex Institute*, XVIII. p. 185.

³ Iroquois games, *Journal of American Folk Lore*, IX, p. 269.

for the first, or six with the Seneca. The game is played singly or by partners, and there is no limit to the number. Usually there are three or four players.

In counting the grains there is a kind of ascending reduction; for as two birds make one pumpkin, only one bird can appear in the result. First come the twenties, then the fours, then the twos, which can occur but once. Thus we may say for twenty, *Jo-hau-tó-tah*, "you have one field" or more, as the case may be. In fours we can only say *Ki-yae-ne-you-sáh-ka*, "you have four pumpkins," for five would make a field. For two beans there is the simple announcement of *O-yú-ah*, "bird."

The game of peach-stones, much more commonly used and important, has a more public character, although I have played it in an Indian parlor. In early days the stones of the wild plum were used, but now six peach-stones are ground down to an elliptic flattened form, the opposite sides being black or white. This is the great game known as that of the dish nearly three centuries ago. The wooden bowl which I used was 11 inches across the top and 3 inches deep, handsomely carved out of a hard knot. A beautiful small bowl, which I saw elsewhere, may have been used by children. The six stones are placed in the *Kah-oón-wah*, the bowl, and thence the Onondaga term the game *Ta-yunc-oo-wáh-es*, throwing the bowl to each other as they take it in turn. In public playing two players are on their knees at a time, holding the bowl between them. Beans are commonly used for counters. Many rules are settled according to agreement, but the pumpkin is left out, and the stones usually count five for a bird and six for a field. All white or all black is the highest throw, and five or six are the only winning points. In early days it would seem that all white or all black alone counted. The bowl is simply struck on the floor. This ancient game is used at the New Year's or White Dog Feast among the Onondaga yet. Clan plays against clan, the Long House against the Short House, and, to foretell the harvest, the women play against the men. If the men win, the ears of corn will be long like them; but if the women gain the game, they will be short, basing the results on the common proportion of the sexes. As of old, almost all games are yet played for the sick, but they are regarded now more as a diversion of the patient's mind than a means of healing. The game of the dish was once much used in divination, each piece having its own familiar spirit. But it is more commonly a social game now.

SENECA. New York.

Morgan¹ describes the Iroquois game under the name of *Gus-ga-e-sá-tü*, or "deer-buttons."

This was strictly a fireside game, although it was sometimes introduced as an amusement at the season of religious councils, the people dividing into tribes as usual and betting upon the result. Eight buttons, about an inch in diameter, were made of elk horn, and, having been rounded and polished, were slightly burned upon one side to blacken them [fig. 47]. When it was made a public game it was played by two at a time, with a change of players as elsewhere described in the Peach-stone game. At the fireside it was played by two or more, and all the players continued in their seats until it was determined. A certain number of beans (fifty perhaps) were made the capital, and the game continued until one of the players had won them all. Two persons spread a blanket and seated themselves upon it. One of them shook the deer-buttons in his hands and then threw them down. If six turned up of the same color, it counted two; if seven, it counted four; and if all, it counted twenty, the winner taking as many beans from the general stock as he made points by the throw. He also continued to throw as long as he continued to win. When less than six came up, either black or white, it counted nothing, and the throw passed to the other player. In this manner the game was continued until the beans were taken up between the two players. After that the one paid to the other out of

¹ League of the Iroquois, Rochester, 1851, p. 302.

his own winnings, the game ending as soon as the capital in the hands of either player was exhausted. If four played, each had a partner or played independently, as they were disposed; but when more than two played, each one was to pay the winner the amount won. Thus, if four were playing independently, and after the beans were distributed among them, in the progress of the game one of them should turn the buttons up all black or all white, the other three would be obliged to pay

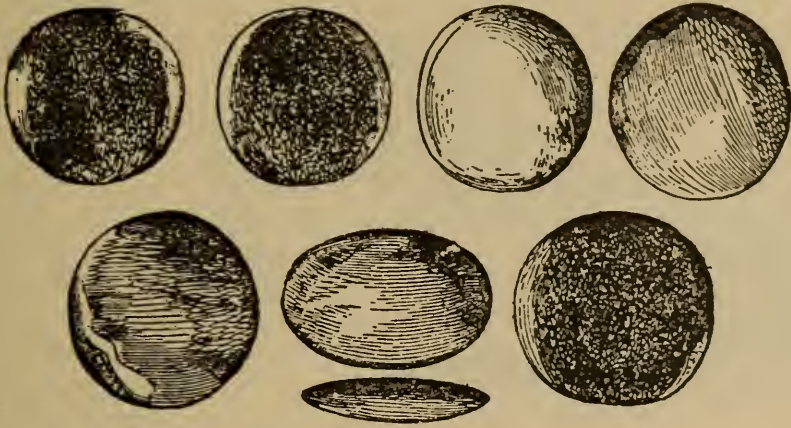


Fig. 47.

GUS-GA-E-SÁ-TÄ, OR DEER-BUTTONS.

Seneca Indians, New York.

After Morgan.

him twenty each; but if the beans were still in bank, he took up but twenty. The deer buttons were of the same size. In the figure [fig. 47] they are represented at different angles.

An ancient and favorite game of the Iroquois, *Gus-kä'-eh*, was played with a bowl and peach-stones. It was always a betting game, in which the people divided by tribes. By established custom, it was introduced as the concluding exercise on the last day of the Green Corn and the Harvest festivals, and also of the New Year's jubilee. Its introduction among them is ascribed to the first *To-do-dä'-ho*, who flourished at the formation of the League. A popular belief prevailed that this game would be enjoyed by them in the future life—in the realm of the Great Spirit—which is perhaps but an extravagant way of expressing their admiration for the game. A dish about a foot in diameter at the base was carved out of a knot or made of earthen. Six peach-stones were then ground or cut down into an oval form, reducing them in the process about half in size, after which the heart of the pit was removed and the stones themselves were burned upon one side to blacken them. The above representation [figs. 48,



Fig. 48.

GUS-KÄ'-EH, OR PEACH STONES.

Seneca Indians, New York.

After Morgan.

49] will exhibit both the bowl and the peach-stones, the latter being drawn in different positions to show the degree of their convexity.

It was a very simple game, depending, in part, upon the dexterity of the player, but more upon his good fortune. The peach-stones were shaken in the bowl by the player, the count depending upon the number which came up of one color after they

had ceased rolling in the dish. It was played in the public council-house by a succession of players—two at a time—under the supervision of managers appointed to represent the two parties and to conduct the contest. Its length depended somewhat upon the number of beans which made the bank—usually one hundred—the victory being gained by the side which finally won them all.

A platform was erected a few feet from the floor and spread with blankets. When

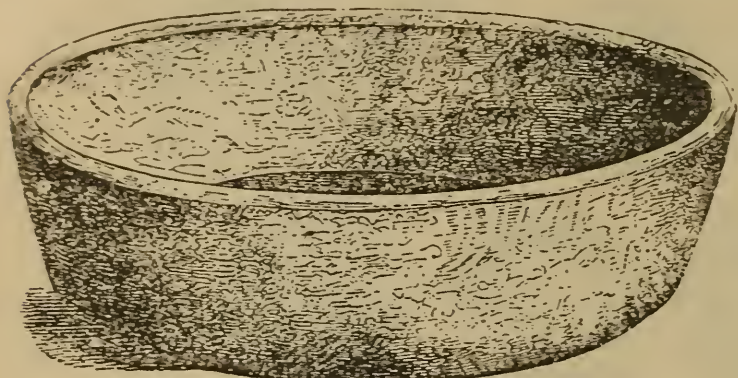


Fig. 49.

GA-JIH, OR BOWL FOR GAME.

Seneca Indians, New York.

After Morgan.

the betting was ended, and the articles had been delivered into the custody of the managers, they seated themselves upon the platform in the midst of the throng of spectators, and two persons sat down to the game between the two divisions into which they arranged themselves. The beans, in the first instance, were placed together in a bank. Five of them were given each player,

with which they commenced. Each player, by the rules of the game, was allowed to keep his seat until he had lost this outfit, after which he surrendered it to another player on his own side selected by the managers of his own party. And this was the case, notwithstanding any number he might have won of his adversary. Those which he won were delivered to his party managers. The six peach-stones were

placed in the bowl and shaken by the player: if five of them came up of one color, either white or black, it counted one, and his adversary paid to him the forfeit, which was one bean; the bean simply representing a unit in counting the game. On the next throw, which the player having won retained, if less than five came up of the same color it counted nothing, and he passed the bowl to his adversary. The second player then shook the bowl; upon which, if they all came up of one color, either white or black, it counted five. To pay this forfeit required the whole outfit of the first player, after which, having nothing to pay with, he vacated his seat and was succeeded by another of his own side, who received from the bank the same number of beans the first had. The other player followed his throw as long as he continued

to win; after which he repassed the bowl to his adversary. If a player chanced to win five and his opponent had but one left, this was all he could gain. In this manner the game continued, with varying fortune, until the beans were divided between the two sides in proportion to their success. After this the game continued in the same manner as before, the outfit of each new player being advanced by the managers of his own party; but as the beans or counters were now out of sight, none

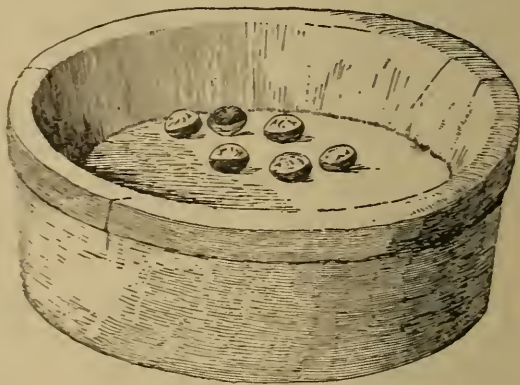


Fig. 50.

PEACH STONE BOWL GAME.

Greatest diameter of bowl, 9½ inches.

Seneca Indians, New York.

Collected by J. N. B. Hewitt.



BONE GAMING DISKS.

Diameter, $\frac{1}{2}$ inch.

Seneca Indians, New York.

Cat. No. 21073, Museum of Archæology, University of Pennsylvania.

but the managers knew the state of the game with accuracy. In playing it there were but two winning throws, one of which counted one and the other five. When one of the parties had lost all their beans, the game was done.

The implements for a Seneca bowl game in the possession of Mr. John N. B. Hewitt, of the Bureau of American Ethnology, obtained by him from the Seneca Indians, Cattaraugus Reservation, Cattaraugus County, New York, consist of a wooden bowl (fig. 50), $9\frac{3}{4}$ inches in diameter, and six dice made of fruit stones. A set of bone gaming disks from the same tribe and place, also in his possession, are represented in plate 6. As will be seen, they are eight in number, and marked on one side, in a similar way to those of the Miemac and Penobscot.

TUSCARORA (?), North Carolina.

Referring to the North Carolina Indians, Mr. John Lawson¹ writes:

They have several other games, as with the kernels or stones of persimmons, which are in effect the same as our dice, because winning or losing depends on which side appears uppermost and how they happen to fall together.

Again, speaking of their gambling, he says²:

Their arithmetic was kept with a heap of Indian grain.

He does not specify this game as played by any particular tribe in North Carolina, and it was probably common to all of them.

KERESAN STOCK.

LAGUNA. New Mexico.

Capt. George H. Pradt, of Laguna, writes as follows:

The game played with a circle of small stones is called, by the Keres pueblos, "Ka-wá-su-kuts."³ The stones number forty, and are divided into tens by openings called doors or gates called "Si-am-ma;" the doors are placed north, south, east, and west.

In the center of the circle is placed a flat stone, upon which are thrown the three counters. These are flat pieces of wood about 4 inches long, $\frac{1}{2}$ inch wide, and $\frac{1}{4}$ inch thick; painted black on one side, and marked with 2, 3, and 10 marks, respectively. The counters are firmly grasped with the ends down, and forcibly thrown (ends down) on the stone in the center, in such a manner that they will rebound, and the marks, if any are uppermost, are counted, and the player lays his marker (a small stick like a pencil) between the stones the proper distance from the starting point to record the number. The starting point is one of the "doors," whichever is selected, and the game is played by any number that can assemble around the circle. A player can go around the circle in either direction, but if another player arrives at the same point he "kills" the previous player and that one is obliged to go back to the starting point; the first one making the circuit successfully wins the game, which is generally played for a small stake. The game is modified sometimes by ruling that if a player falls into one of the doors he must go back, but in this case the player is not obliged to go back if another happens to mark as many points as he.

Sometimes a round stone is painted to resemble a face and has a wreath of ever-

¹ The History of North Carolina, London, 1719, p. 176.

² Page 27.

³ Meaning a "punch" or sudden blow, the only name the Laguna have for it. (G. H. P.)

greens placed around it, and is used as a mascot; it is placed to one side of the circle and is appealed to by the players to give them good numbers; this mascot is generally called "Kûm-mûshk-ko-yo," a traditional fairy or witch. The name means "the old spider woman."

SIA. New Mexico.

Mrs. Matilda Coxe Stevenson¹ describes the game as played by the Sia under the name of *Wash'kasi*.

Forty pebbles form a square, ten pebbles on a side, with a flat stone in the center of the square (fig. 51). Four flat blocks, painted black on one side and unpainted on the other, are held vertically and dropped upon the stone.

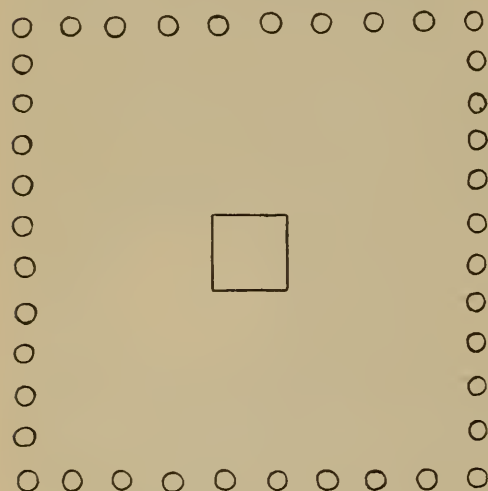


Fig. 51.

CIRCUIT FOR SIA STAVE GAME.

After Stevenson.

The counts are as follows:

4 painted sides up	= 10
4 unpainted sides up	= 6
3 painted sides up	= 3
2 painted sides up	= 2
1 painted side up	=

The players move in opposite directions, both starting at one of the corners. The game is described as the first of four games played by Po'shaiyänne, the Sia culture hero, with the tribal priest. The stake was the latter's house in the north. The second of the four games is of the bowl class, which I have included in this series. The stake in this game was the *ti'ümoni*, or priest's,

house in the west. It was played with six 2-inch cubes, which were highly polished and painted on one side. These were tossed up in a large bowl held with each hand. "When three painted sides are up, the game is won; with only two painted sides up, the game is lost. Six painted sides up is equivalent to a march in euchre." The games that followed were, first, a game played with four sticks with hollow ends, under one of which a pebble was hidden. This was played for the priest's house in the south. Second, a game played with four little mounds of sand, in one of which a small round stone was hidden. This was played for the priest's house in the east. The games were then repeated in the same order commencing with *Wash'kasi* for the house in the zenith, the game with the six blocks for the house in the nadir, and finally, the third in order, that with the four sticks with hollow ends, for all the people of the tribe.

Mr. Charles F. Lummis informs me he has witnessed the game with the staves or blocks in the following pueblos belonging to this stock: Acoma, Cochitö, Laguna, El Rito (Laguna Colony) and San Felipe.

¹ The Sia, Eleventh Annual Report of the Bureau of Ethnology, Washington, 1894, p. 60.

KIOWAN STOCK.

KIOWA. Indian Territory. (Cat. No. 152908a, U.S.N.M.)

Set of four sticks of willow wood, 7 inches in length, $\frac{3}{8}$ inch in width, and $\frac{3}{16}$ inch in thickness (fig. 52), nearly hemispherical in section, with one side flat, and having a deep groove, the stick being doubtless a substitute for the cane, like that used by the Zuñi, as suggested by Mr. Cushing. Three of the grooves are painted red, these sticks having two oblique marks burned across the grooved face near each end. The fourth stick has the groove painted black, with three lines burned across the middle in addition to those at the ends. Its rounded reverse is marked with a star in the center, composed of four crossed lines burned in the wood. The rounded sides of the others are plain. The collector, Mr. James Mooney,¹ prefaces his account of the game with the following song, employed in the Ghost Dance:

*Hise' hi, hise' hi,
Hä' tine' bāku' tha' na,
Hä' tine' baku' tha' na,
Häti' ta-u' seta' na,
Häti' ta-u' seta' na.*

TRANSLATION.

My comrade, my comrade,
Let us play the awl game,
Let us play the awl game,
Let us play the dice game,
Let us play the dice game.

The woman who composed this song tells how, on waking up in the spirit world, she met there a party of her former girl companions and sat down with them to play the two games universally popular with the prairie tribes.

The first is called *ně' bāku' thana* by the Arapaho and *tsoñä* or "awl game" (from *tsoñ*, an awl) by the Kiowa, on account of an awl, the Indian woman's substitute for a needle, being used to keep record of the score. The game is becoming obsolete in the north, but is the everyday summer amusement of the women among the Kiowa, Comanche, and Apache in the southern plains. It is very amusing on account of the unforeseen "rivers" and "whips" that are constantly turning up to disappoint the expectant winner, and a party of women will frequently sit around the blanket for half a day at a time, with a constant ripple of laughter and good-humored jokes as they follow the chances of the play. It would make a very pretty picnic game, or could be readily adapted to the parlor of civilization.

The players sit on the ground around a blanket marked in charcoal with lines and dots and quadrants in the corners, as shown in fig. 6. In the center is a stone upon which the sticks are thrown. Each dot, excepting those between the parallels,

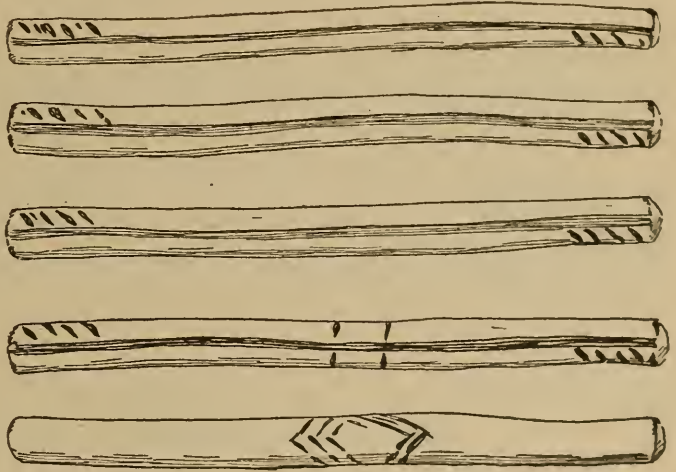


Fig. 52.

SET OF STAVES FOR GAME.

(The lowest stick shows obverse of one above it.)

Length, $5\frac{1}{2}$ inches.

Kiowa Indians, Indian Territory.

Cat. No. 152908a, U.S.N.M.

¹The Ghost Dance Religion, Fourteenth Annual Report of the Bureau of Ethnology, Washington, 1896, II, p. 1002.

counts a point, making twenty-four points for dots. Each of the parallel lines and each end of the curved lines at the corners also counts a point, making sixteen points for the lines, or forty points in all. The players start at the bottom, opposing players moving in opposite directions, and with each throw of the sticks the thrower moves an awl forward and sticks it into the blanket at the dot or line to which her throw carries her. The parallels on each of the four sides are called "rivers," and the dots within these parallels do not count in the game. The rivers at the top and bottom are "dangerous" and can not be crossed, and when the player is so unlucky as to score a throw which brings her to the edge of the river (i. e., upon the first line of either of these pairs of parallels) she "falls into the river" and must lose all she has hitherto gained, and begin again at the start. In the same way, when a player moving around in one direction makes a throw which

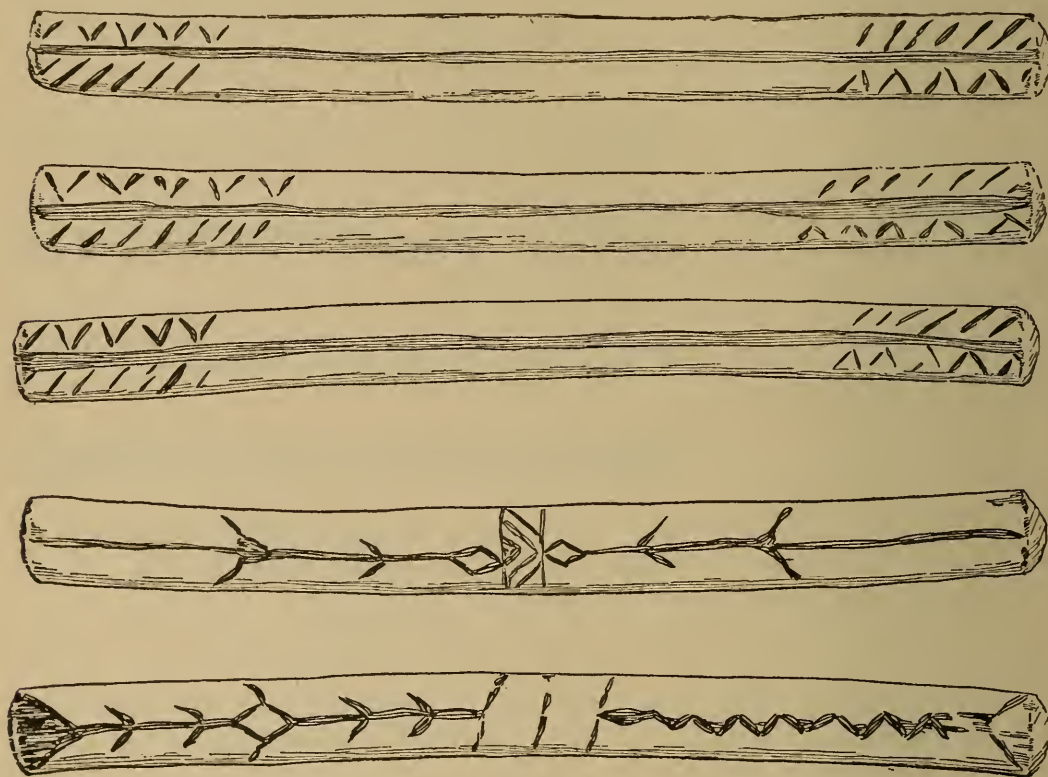


Fig. 53.

SET OF STAVES FOR GAME.

Length, 8 $\frac{3}{4}$ inches.

Kiowa Indians, Indian Territory.

Cat. No. 152908d, U.S.N.M.

brings her awl to the place occupied by the awl of her opponent coming around from the other side, the said opponent is "whipped back" to the starting point and must begin all over again. Thus there is a constant succession of unforeseen accidents, which furnish endless amusement to the players.

The game is played with four sticks, each from 6 to 10 inches long, flat on one side and round on the other. One of these is the trump stick, and is marked in a distinctive manner in the center on both sides, and is also distinguished by having a green line along the flat side, while the others have each a red line. The Kiowa call the trump stick *sahe*, "green," on account of the green stripe, while the others are called *gadal*, "red." There are also a number of small green sticks, about the size of lead pencils, for keeping tally. Each player in turn takes up the four sticks together in her hand and throws them down on end upon the stone in the center. The number of points depends upon the number of flat or round sides which turn

up. A lucky throw with a green, or trump, stick generally gives the thrower another trial in addition. The formula is:

1 flat side up	= 1.
1 flat side up (if <i>sahe</i>)	= 1 and another throw.
2 flat sides up (with or without <i>sahe</i>)	= 2.
3 flat sides up	= 3.
3 flat sides up (including <i>sahe</i>)	= 3 and another throw.
All 4 flat sides up	= 6 and another throw.
All 4 round sides up	= 10 and another throw.

KIOWA. Indian Territory. (Cat. No. 152908*b*, U.S.N.M.)

Set of four sticks of a variety of alder, $5\frac{1}{2}$ inches in length, $\frac{7}{16}$ inch in width, and $\frac{1}{4}$ inch in thickness. Three with groove painted red, on flat side, and one with groove painted black. The former are burned with four diagonal marks resembling the feathering of an arrow on

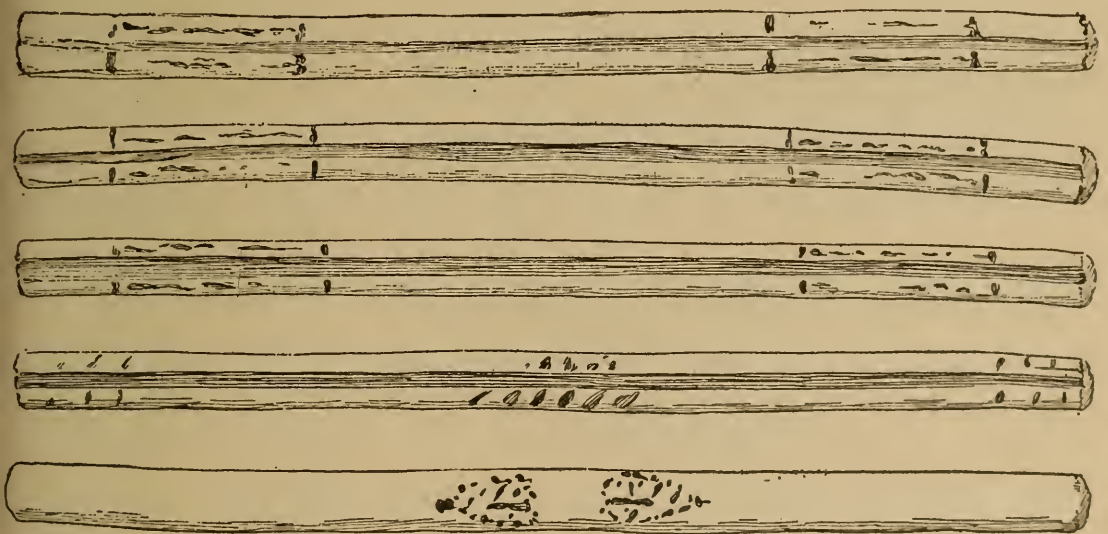


Fig. 54.

STAVES FOR GAME.

Length, $8\frac{3}{8}$ inches.

Kiowa Indians, Indian Territory.

Cat. No. 152908*c*, U.S.N.M.

alternate sides of the groove near each end. The fourth stick has in addition two parallel marks burned directly across the middle. Its rounded reverse is burned with a design in the shape of a diamond. The reverses of the others are plain.

KIOWA. Indian Territory. (Cat. No. 152908*d*, U.S.N.M.)

Set of four sticks of willow wood or chestnut sprout, $8\frac{3}{4}$ inches in length, $\frac{3}{4}$ inch in breadth, and $\frac{5}{16}$ inch in thickness (fig. 53). Three have flat sides with lengthwise groove painted red, with parallel oblique lines like arrow feathering burned on alternate sides of the groove at the ends, opposite to which are similar marks arranged in triangles. The rounded reverses of these sticks are plain. The fourth stick has an incised device painted black and resembling two feathered arrows, the heads of which meet a transverse band cut across the middle.

Its rounded side has three parallel lines burned across the center, on one side of which is an incised design resembling a serpent, and on the other an undetermined figure.

KIOWA. Indian Territory. (Cat. No. 152908c, U.S.N.M.)

Set of four sticks of elm wood, $8\frac{7}{8}$ inches in length, $\frac{9}{16}$ inch in width, and $\frac{5}{16}$ inch in thickness (fig. 54). Three with groove painted red and one with groove painted black. Former burned with two sets of two parallel marks about $1\frac{7}{8}$ inches apart across the grooved face near each end.

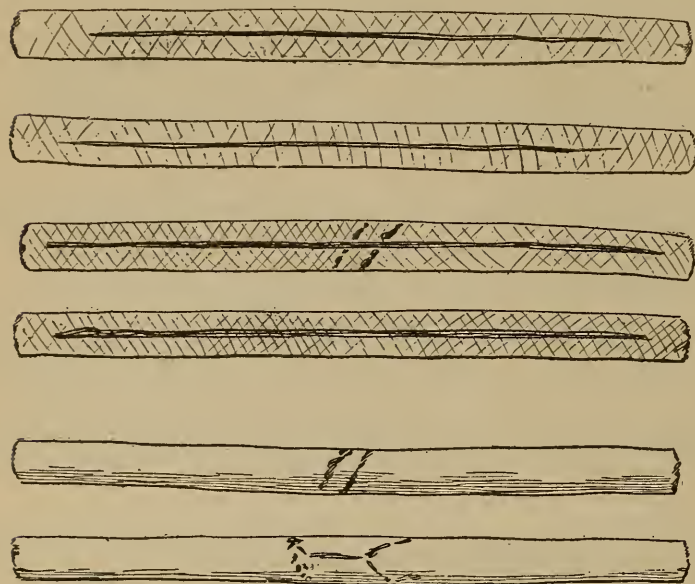


Fig. 55.

SET OF STAVES FOR GAME.

(The two lower sticks represent the obverses of those directly above.)

Length, $5\frac{1}{2}$ inches.

Kiowa Indians, Indian Territory.

Cat. No. 152909a, U.S.N.M.

The fourth stick has in addition oblique marks burned across the center of the same side, with two pyramidal dotted designs in the center of the opposite rounded side, which on the others is plain.

KIOWA. Indian Territory. (Cat. No. 152909a, U.S.N.M.)

Set of four sticks, $5\frac{1}{2}$ inches in length, $\frac{7}{16}$ inch in breadth, and $\frac{3}{16}$ inch in thickness (fig. 55). Section ellipsoidal. One side, slightly flatter than the other, is grooved and marked with fine cross lines, forming a

lozenge pattern. Three are painted red and one dark green. One of the red sticks is burned in the center, with two parallel marks obliquely across both the grooved and opposite side. The green stick has an undetermined figure burned in the center of the rounded side, which on the other two is plain.

KIOWA. Indian Territory. (Cat. No. 152909b, U.S.N.M.)

Set of four sticks, $3\frac{3}{4}$ inches in length, $\frac{5}{16}$ inch in breadth, and $\frac{1}{8}$ inch in thickness. Flat sides grooved and painted, three red and one black. One of the red has an oblique incised line cut across the middle, and two parallel lines on the opposite, rounded side. The black stick has a small triangle cut lengthwise in the center of the rounded side, across which is a transverse incised line.

KIOWA. Indian Territory. (Cat. No. 152909c, U.S.N.M.)

Set of four sticks, $5\frac{3}{8}$ inches in length, $\frac{5}{16}$ inch in breadth, and $\frac{1}{8}$ inch in



IVORY AND WOODEN DICE.

Tlingit Indians, Alaska.

Cat. Nos. E 894, 650, 1859, 650, 1557. American Museum of Natural History, New York.

thickness. The flat sides are grooved and have triangular expansions of the groove at each end. Three are painted red and one black. One of the red sticks is marked like the one in the preceding, and the black stick in the same manner.

These Kiowa sticks were all collected by Mr. James Mooney. In each set there is an odd stick, regarded by the author as corresponding with the *atlale*.

KOLUSCHAN STOCK.

TLINGIT. Alaska. (Amer. Mus. Nat. Hist., New York.)

Small ivory die (Cat. No. E. 650) (Plate 7), shaped like a chair, height



Fig. 56.

LEATHER TABLET ON WHICH DICE ARE THROWN.

Height, $7\frac{3}{4}$ inches.

Tlingit Indians, Alaska.

Cat. No. E. 606, American Museum of Natural History.

1 inch, $\frac{1}{16}$ inch wide at back, and $\frac{1}{16}$ inch at side, with vertical hole from top to bottom filled with lead. It is called *kēt-chü*. From Shakan.

Small wooden die (Cat. No. E. 650) (Plate 7), like preceding. Sides engraved with crossed lines. Back has four lead plugs, and a hole for similar plug. Front has incised rectangular design with three lead plugs.

Small ivory die (Cat. No. E. 894) (Plate 7), like preceding. Height 1 inch, $\frac{1}{16}$ inch wide at back, and $\frac{8}{16}$ inch at side. Front face has small plug of lead.

Small wooden die (Cat. No. E. 1557) (Plate 7), like preceding, $1\frac{1}{2}$ inches high, $\frac{1}{16}$ inch wide at back and sides. Back and three sides marked with incised lines.

Small wooden die (Cat. No. E. 1859) (Plate 7), like preceding, $\frac{5}{16}$ inch high and $\frac{9}{16}$ inch wide at side. Perfectly plain.

From Sitka. Designated as woman's gambling die.

All the above were collected by Lieutenant Emmons.

Dr. Boas informs me that one die is used. The counts are: Either side up = 0; back or front up = 1; bottom up = 2. The dice are thrown upon a thick tablet of leather cut with a totemic device, about 8 inches square. One (Cat. No. E. 606, fig. 56) has the device of a bear's head. Another (Cat. No. E. 1057) a beaver, and still another (Cat. No. E. 2404) an unidentified animal. Similar dice are used by the Kwakiutl. (See p. 716.)

LUTUAMIAN STOCK.

KLAMATH. Oregon. (Cat. No. 24126, U.S.N.M.)

Four woodchuck teeth dice (fig. 57). Two, both lefts, stopped at the end with red cloth, and marked on the flat side with chevron pattern, and two, somewhat smaller, one right and the other left, apparently from the same animal, marked on the same side

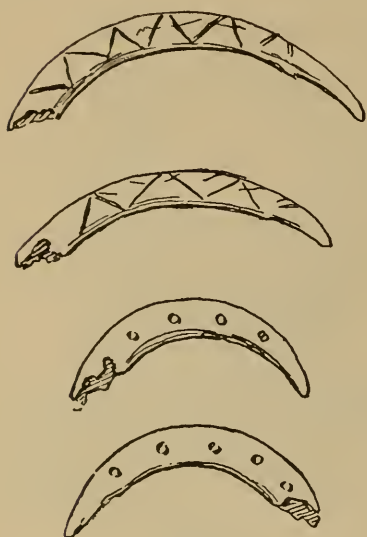


Fig. 57.

SET OF WOODCHUCK TEETH DICE.

Length, $1\frac{1}{4}$ to $1\frac{3}{4}$ inches.

Klamath Indians, Oregon.

Cat. No. 24126, U.S.N.M.

with five small holes. Collected by L. S. Dyer, Indian Agent.

The game is described by Dr. Albert S. Gatschet,¹ under the name of *Skúshash*.

The four teeth of the beaver are marked for this game by the incision of parallel lines or crosses on one side, and a small piece of woolen or other cloth is inserted into the hollow to prevent breaks in falling. The two longer or upper teeth of the beaver are called the *male* (*lakí*), the pair of lower and shorter the *female* teeth (*gúlo*) *kúlu*; distributive form: *kúkalu*. The marked side of the teeth wins, if it is turned up after dropping. The teeth of the woodchuck (*mú-i*, *moi*) serve for the same purpose.

A further account of the game is found in the text translated by Dr. Gatschet:

The Klamath Lake females play a game with beavers' teeth, letting them drop on a rubbing stone. When all the teeth fall with the marked side uppermost, they win two checks. If both female teeth fall right (marked) side up, they win one check. If both male teeth fall right side up, they win one check. Falling

¹ The Klamath Indians, Contributions to North American Ethnology, Washington, 1890, II, Pt. 1, p. 81.

unequally, they win nothing. They quit when one side has won all the stakes. In this game of beavers' teeth (*púman tút*) or woodchucks' teeth (*múgam tút*) they use twelve check sticks to count their gains with. The game is played by two persons, or by two partners on each side. Women only play this game.

The beaver teeth game may be regarded as a modification of the bone game, played by the Blackfeet. The four beaver teeth marked with circles or dots and lines arranged in chevrons clearly replace the four similarly marked staves. Again the tooth tied with sinew (see account by Mr. Eells, p. 747) corresponds with the sinew wrapped staff. The counters, 2, agree with those of the Blackfeet.

MARIPOSAN STOCK.

YOKUT. Fort Tejon and Tule River, California. (Cat. No. 19695, U.S.N.M.)

Set of eight dice (fig. 58), made of canyon walnut shells split in the middle, and each half bowl filled with pitch and powdered charcoal

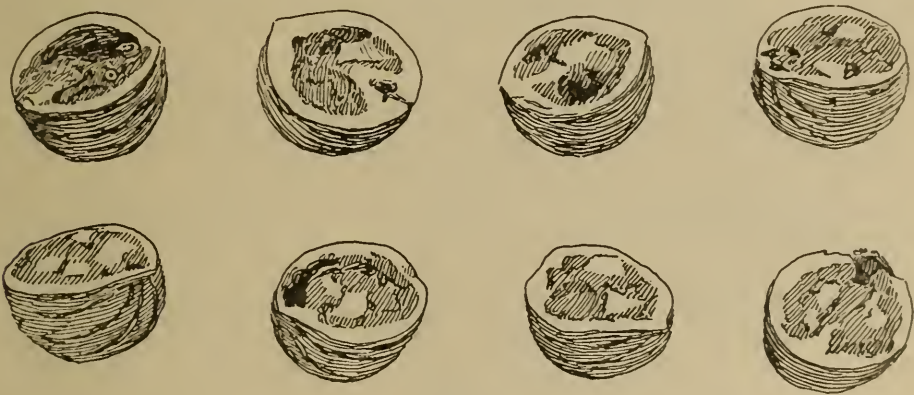


Fig. 58.

SET OF WALNUT SHELL DICE.

Diameter, 1 inch.

Yokut Indians, California.

Cat. No. 19695, U.S.N.M.

inlaid with small red and white glass beads and bits of abalone shell. Collected by Stephen Powers.

The game is thus described by the collector:¹

The Yokuts have a sort of gambling which pertains exclusively to women. It is a kind of dice throwing and is called *u-chu'-us*. For a dice they take half of a large acorn or walnut shell, fill it level with pitch and pounded charcoal, and inlay it with bits of bright-colored abalone shells. For a dice-table they weave a very large, fine basket-tray, almost flat, and ornamented with devices woven in black or brown, mostly rude imitations of trees and geometrical figures. Four squaws sit around it to play, and a fifth keeps tally with fifteen sticks. There are eight dice, and they scoop them up in their hands and dash them into the basket, counting one when two or five flat surfaces turn up. The rapidity with which the game goes forward is wonderful, and the players seem totally oblivious to all things in the world beside. After each throw that a player makes she exclaims, *yet' ní* (equivalent to one-y), or *wi-a-tak*, or *ko-mai-éh*, which are simply a kind of sing-song or chanting.

¹ Stephen Powers, *Tribes of California*, Contributions to North American Ethnology, III, p. 377, Washington, 1877.

NATCHESAN STOCK.

NATCHEZ. Louisiana.

Le Page du Pratz¹ says, referring to the women's game of the Natchez:

These pieces with which they play are three little bits of cane from 8 to 9 inches long, split in two equal parts and pointed at the ends. Each piece is distinguished by the designs which are engraved on the convex side. They play three at a time and each woman has her piece. To play this game they hold two of these pieces of cane on the open left hand, and the third in the right hand, the round side uppermost, with which they strike upon the others, taking care to only touch the end. The three pieces fall, and when there are two of them which have the convex side uppermost, the player marks one point. If there is only one, she marks nothing. After the first, the two others play in their turn.

PIMAN STOCK.

PAPAGO. Pima County, Arizona. (Cat. No. 174516, U.S.N.M.)

Set of four sticks of sehuara cactus, about $9\frac{1}{4}$ inches in length, $\frac{3}{4}$ inch in width and $\frac{1}{4}$ inch thick (fig. 59). Section ellipsoidal. Painted solid

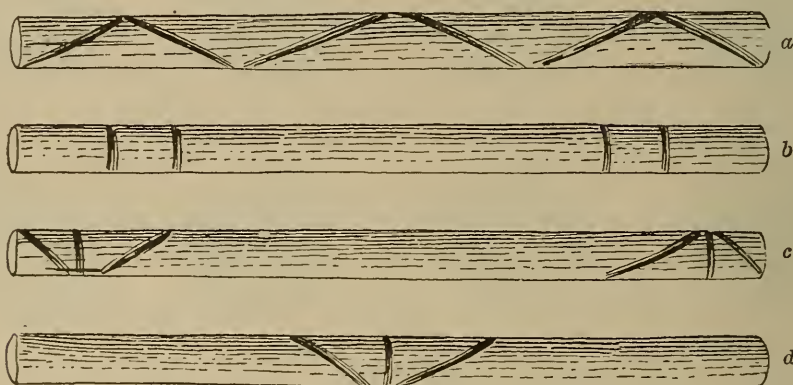


Fig. 59.

SET OF STAVES FOR GHING-SKOOT.

Length, $9\frac{1}{4}$ inches.

Papago Indians, Pima County, Arizona.

Cat. No. 174516, U.S.N.M.

red on one side, "which is flat and marked with black lines of numerical and sex significance." Collected by Mr. W J McGee and Mr. William Dinwiddie.

The game is described by the collectors under the name of *Ghing-skoot*. The four marked faces receive the following names:

- (a) "Old man."
- (c) "Young man."
- (b) "Old woman."
- (d) "Young woman."

In the play the sticks are held vertically, bunched in the right hand, and struck from underneath on their lower ends by a stone grasped in the left hand, the blow shooting them vertically into the air (Plate 8).

¹Histoire de la Louisiane, Paris, 1768, III, p. 4.



PAPAGO INDIAN STRIKING STAVES IN THE AIR IN PLAYING GHING-SKOOT.
From a photograph by William Dinwiddie.

When 2 backs and 2 fronts of any sticks come up it equals 2.

When 3 fronts and 1 back of any sticks come up it equals 3.

When 3 backs and the "Young Man" come up it counts 4.

All fronts up count 5.¹

When 3 backs and the "Old Woman" come up it counts 6.

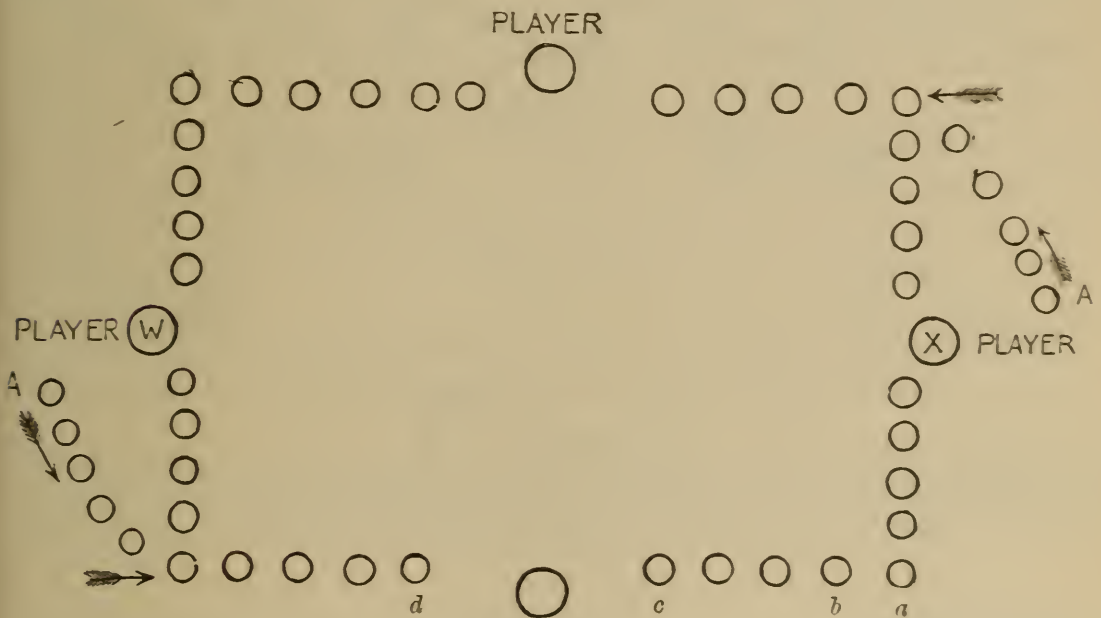
All backs count 10.

When 3 backs and the "Young Woman" come up it counts 14.

When 3 backs and the "Old Man" come up it counts 15.

If the sticks touch or fall on one another the throw must be repeated.

The counts are kept upon a rectangle marked on the ground (fig. 60), usually approximating 12 by 8 feet, having ten holes or pockets, counting the corners each time, along each side. At two alternate corners are two quadrants called "houses" (*kee*) of five holes each, not counting the corner holes, called "doors" (*jou-tu*).



CIRCUIT FOR PAPAGO STAVE GAME.

McGee and Dinwiddie.

The game is played by two, three, or four players for self or partners, with counters called "horses." These usually number two for each player. They are put into play consecutively and by alternate throws of the players. A throw of less than five, which does not carry the horses out of the door (two), prevents a player from entering another horse until his aggregate throws are 5+, thus putting his horse into the rectangle proper. After all the horses of a single contestant are in play, he may move the same horse continuously. In counting the pockets, from "A" to either of the nearest corners, is 15. It is optional with the player whether he turns to the left or right upon leaving the door, though he must move his horse around the rectangle in the same

¹ At this play they all laugh, and say the player "has not done skinning himself."

direction after once starting. If "X" throw 15, moving to "a," and "W" throws the same number, enabling him to move to the same point, he "kills" or throws "X's" horse out of play, and he must start his piece over again; and again, if he should throw 14, he accomplishes the same result (there is no "one" in the stick count). However, if "X" should get to "c" and "W" throw 10 from "house," and get to "d," he does not kill him. If on the next throw "W" throws 14 and "X" has not moved from "c" he kills him.

A horse must run entirely around the rectangle and back into the house pockets, where he is safe from being "killed;" but to make him a winning piece, the exact number to count to "a" must be thrown by the sticks. When a horse is upon a pocket adjoining "a," a two throw

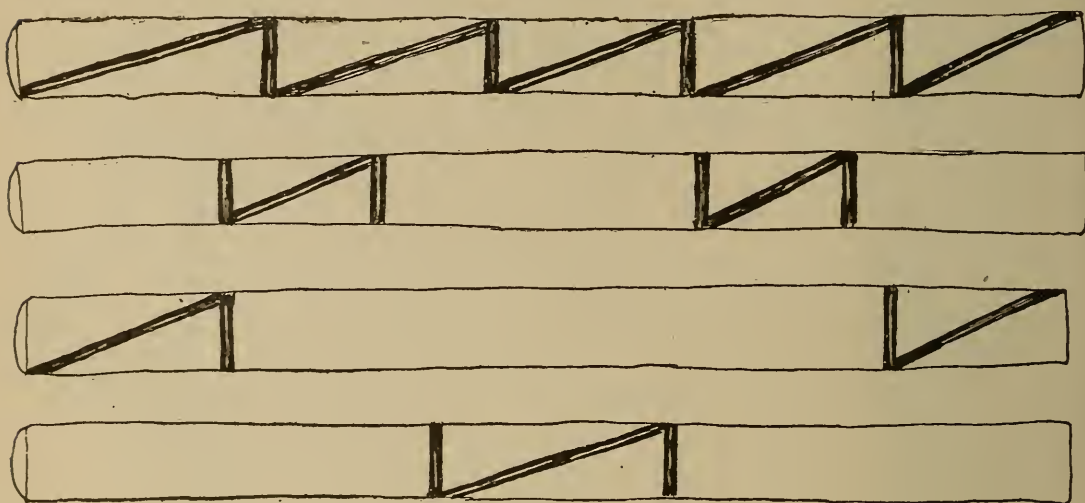


Fig. 61.

SET OF STAVES FOR GAME.

Length, 9 inches.

Pima Indians, Arizona.

Cat. No. 27842, U.S.N.M.

is considered out. The object of the game is to carry all the horses around the pockets and out again at "a," the first player succeeding in this being declared the winner.

PIMA. Arizona. (Cat. No. 27842, U.S.N.M.)

Set of four sticks of willow¹ wood, 9 inches in length, $\frac{3}{4}$ inch in breadth, and $\frac{1}{4}$ inch in thickness (fig. 61). Flat on one side, which is incised with transverse and diagonal lines filled in with black paint; opposite, rounded and painted red. Collected by Mrs. G. Stout.

PIMA. Arizona. (Cat. No. 27843, U.S.N.M.)

Set of four sticks of willow¹ wood, $8\frac{3}{8}$ inches in length, $\frac{3}{4}$ inch in breadth, and $\frac{1}{4}$ inch in thickness (fig. 62). Identical with preceding, except in the arrangement of the incised lines. Collected by Mrs. G. Stout.

¹ *Salix amygdaloides*.

PIMA. Arizona. (Cat. No. 76017, U.S.N.M.)

Set of four sticks of hazel wood, $7\frac{1}{4}$ inches in length, $\frac{1}{2}$ inch in breadth,

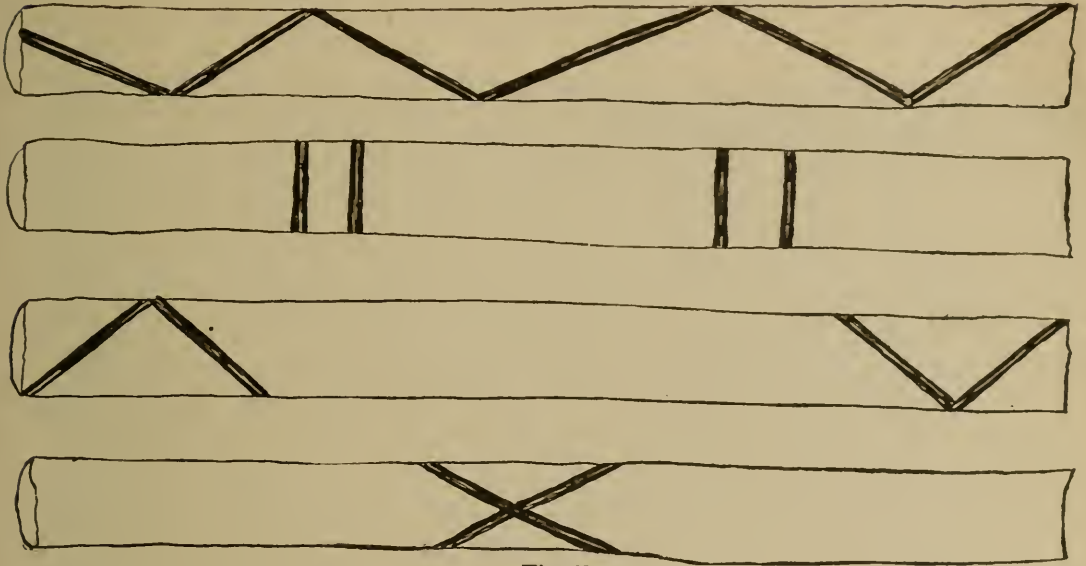


Fig. 62.

SET OF STAVES FOR GAME.

Length, $8\frac{3}{8}$ inches.

Pima Indians, Arizona.

Cat. No. 20843, U.S.N.M.

and $\frac{1}{4}$ inch in thickness (fig. 63). Flat on one side, and marked with incised lines cut at angles across the sticks. These lines are painted

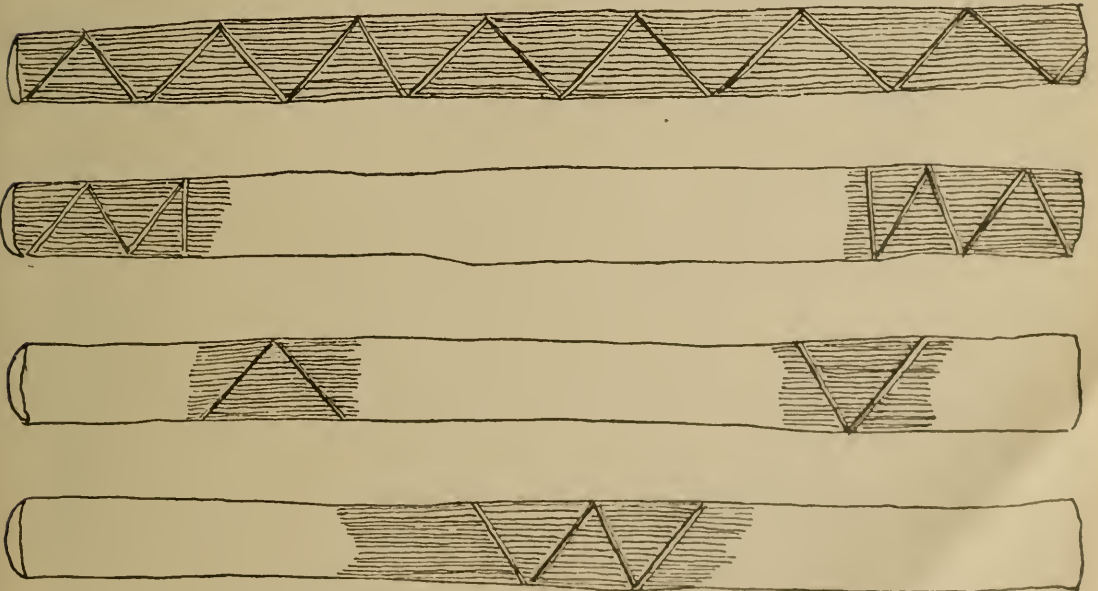


Fig. 63.

SET OF STAVES FOR GAME.

Length, $7\frac{1}{4}$ inches.

Pima Indians, Arizona.

Cat. No. 76017, U.S.N.M.

red, and the inscribed faces painted black. Opposite, rounded sides, plain. Collected by Mr. Edward Palmer. Described as men's sticks.

Mr. Palmer states:

A space of 10 square feet is inclosed by holes made in the ground (fig. 64). At opposite corners on the outside are two semicircular rows of five holes each. At the beginning a marking stick is put in the center hole A of each semicircle, and the point is to play around the square, and back again to the center hole. Each pair of players moves the pegs in opposite directions, and whenever the count is made that would bring the stick to the hole occupied by that of the antagonist, he is sent back to his original starting place.

The counts are as follows:

4 round sides up = 10.

4 flat sides up = 5.

When only one flat side is up, it counts whatever is marked on it; any three, counts 3, and any two, 2.

PIMA. Arizona. (Cat. No. 76018, U.S.N.M.)

Set of four sticks, $7\frac{3}{4}$ inches long, $\frac{1}{2}$ inch in breadth, and $\frac{1}{4}$ inch in thickness. Flat on one side and painted black; opposite, rounded and painted red. Collected by Mr. Edward Palmer. Described by the collector as women's sticks. Two play. The sticks are held in the right hand, between the thumb and forefinger, and,

with an underthrow, touch the ground slightly, and are let fly.

The counts are as follows:

4 blacks = 2.

4 reds = 1.

2 blacks = out.

TARAHUMARA. Pueblo of Carichic, Chihuahua, Mexico. (Cat. No. $\frac{65}{846}$, Amer. Mus. Nat. Hist., New York.)

Set of four split reeds,¹ 6 inches in length and $\frac{1}{2}$ inch in width, marked on inner, flat sides, as shown in fig. 65. Opposite sides plain. Used in the game of *Ro-ma-la-ka*, or *Quince* (Plate 9). They call the sticks *Ro-ma-la*.

TEPEGUANA. Talayote, near Nabogame, Chihuahua, Mexico. (Cat. No. $\frac{65}{911}$, Amer. Mus. Nat. Hist., New York.)

Set of four ash-wood sticks, $18\frac{1}{2}$ inches in length, $\frac{3}{4}$ inch broad, and $\frac{1}{8}$ inch thick, marked on one side with incised lines smeared with red paint (Plate 10, fig. 1); reverse, plain.

TEPEGUANA. Chihuahua, Mexico. (Cat. No. $\frac{65}{910}$, Amer. Mus. Nat. Hist., New York.)

Set of four ash-wood sticks identical with the preceding, except that they are $16\frac{3}{4}$ inches in length. (Plate 10, fig. 2.)

¹ Called by the natives *tubar*.



TARAHUMARA INDIANS PLAYING "QUINCE" AT THE PUEBLO OF PEÑASCO BLANCO.

From a photograph by Dr. Carl Lamholtz.



a

b

c

SETS OF STAVES FOR GAME OF QUINCE.

Lengths: a, 18½ inches; b, 16½ inches; c, 11¼ to 13¼ inches.

Tepeguana Indians, Chihuahua, Mexico.

Cat. Nos. 311⁶⁵, 316⁶⁵, 1039⁶⁵, American Museum of Natural History, New York.

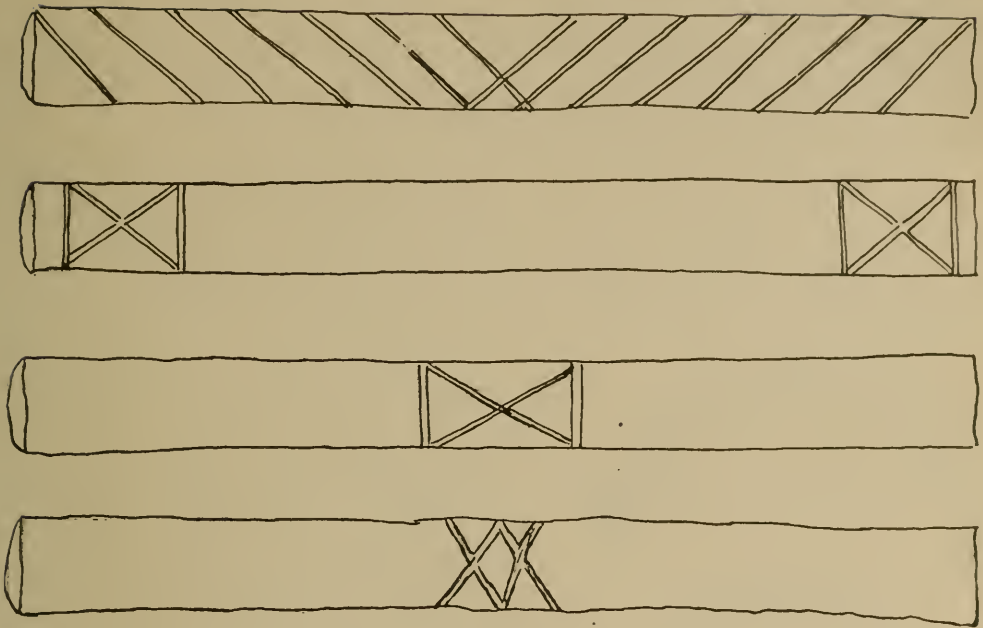


Fig. 65.

SET OF STAVES FOR GAME OF RO-MA-LA-KA.

Length, 6 inches.

Tarahumara Indians, Pueblo of Carichic, Chihuahua, Mexico.

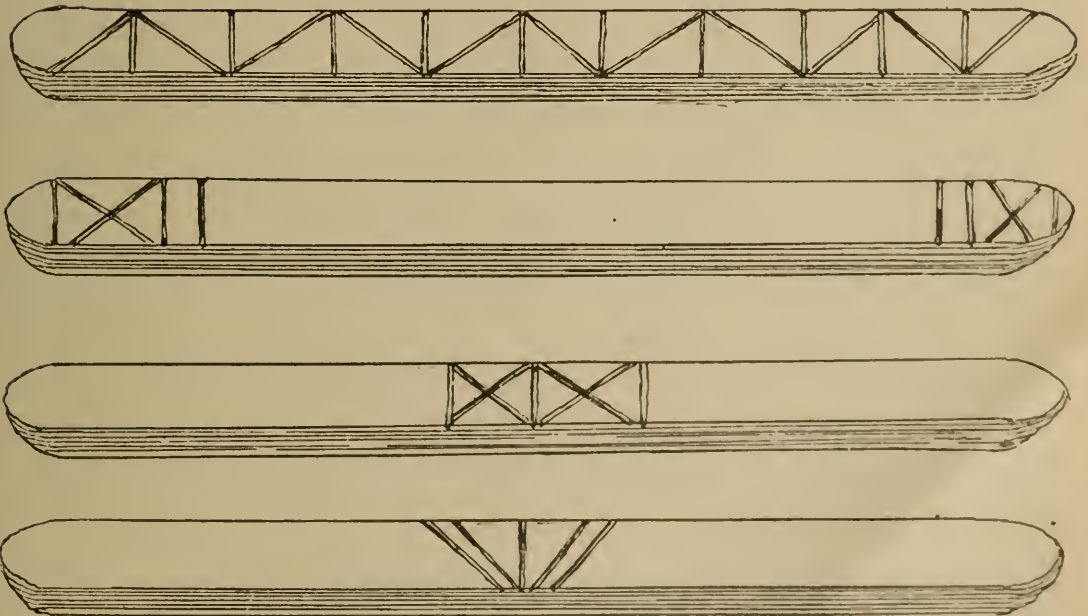
Cat. No. $\frac{65}{846}$, American Museum of Natural History.

Fig. 66.

SET OF STAVES FOR GAME.

Length, $6\frac{1}{2}$ inches.

Tepeguana Indians, Chihuahua, Mexico.

Cat. No. $\frac{65}{1038}$, American Museum of Natural History.

TEPEGUANA. Chihuahua, Mexico. (Cat. No. $\frac{65}{1039}$, Amer. Mus. Nat. Hist., New York.)

Set of four sticks of canyon walnut or hickory, of slightly different lengths, from $11\frac{1}{4}$ to $13\frac{1}{2}$ inches; $\frac{1}{16}$ inch wide and $\frac{1}{8}$ inch thick. One side flat with incised designs composed of straight and oblique lines, the incised places being stained red (Plate 10, fig. 3); opposite sides rounded and plain.

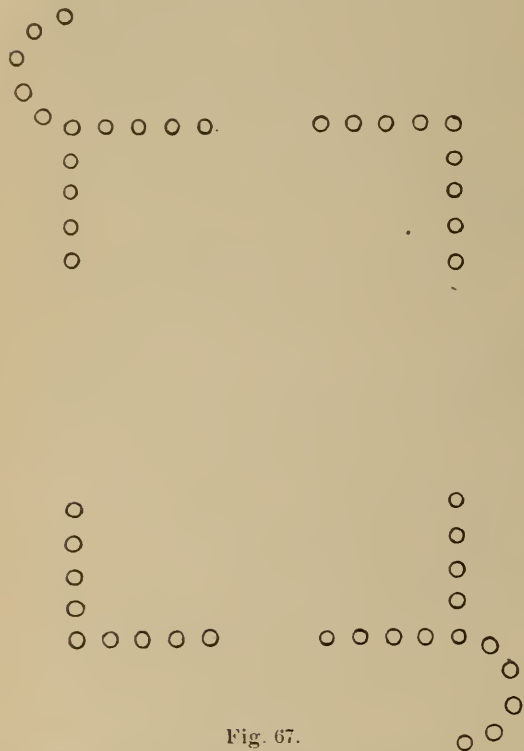


Fig. 67.

CIRCUIT FOR TEPEGUANA AND TARAHUMARA STAVE GAME.

Dr. Carl Lumholtz.

TEPEGUANA. Chihuahua, Mexico. (Cat. No. $\frac{65}{1038}$, Amer. Mus. Nat. Hist., New York.)

Set of four sticks of piñon wood, $6\frac{1}{2}$ inches in length and $\frac{3}{8}$ inch square. These sticks have four instead of two faces. Two opposite sides are flat and unpainted. One set of the other four sides are unpainted, with incised lines filled with red paint, as shown in fig. 66. The sides opposite to these are slightly rounded and painted red. The top stick is marked with a diagonal line across the middle, the next with two straight transverse lines near each end, the third is plain, and the fourth has a single transverse cut across the middle.

The preceding Tarahumara and

Tepeguana specimens were all collected by Dr. Carl Lumholtz. He informs me that the Tepeguana call the game *In-tú-ri-ga-i | zú-li | ga-i-rá-ga-i*, "game straight throwing." It is also generally known by the Spanish name of *Quince*,¹ or "Fifteen."

He states that it is played by all the tribes in Chihuahua who live in or near the Sierra, and by the Mexicans as well, but is not seen south of the State of Durango. It is not known to the Cora or Huichole in the State of Jalisco, or to the Tarasco of Michoacan.²

¹ Also in French, *Quinze*, "a popular game with cards, in which the object is to make fifteen points." The name *Quince* does not appear to be confined among the Indians to the game played with staves. Mr. Edward Palmer describes the following game under the name of *Quins* (*quince*?) among the Pima of Arizona: "Any number can play. A short, split stick is first thrown in a slanting direction, and each one pitches his arrow to see who can come nearest to it. The one who does so holds the stick up while the others pitch. If the arrow touches the split stick and does not catch, the thrower loses nothing. If, however, the arrow remains in the split stick it becomes the property of the holder. The game ends when one has all the arrows or they tire out."

² Mr. C. V. Hartman, who accompanied Dr. Lumholtz, informs me that *Quince* is played with four flattened reeds by the Zaque Indians of the Rio Fuerte in Sinaloa. They call the game in their language *ké-zu-te*.

Dr. Lumboltz informs me that *Quince* is played by throwing the four staves against a flat stone, the counts being kept around a diagram (fig. 67), which consists of holes pecked in the rock, about 3 by 4 feet.

PUJUNAN STOCK.

NISHINAM. California. Powers¹ gives the following account:

The *ha* is a game of dice, played by men or women, two, three, or four together. The dice, four in number, consist of two acorns split lengthwise into halves, with the outsides scraped and painted red or black. They are shaken in the hands and thrown into a wide, flat basket, woven in ornamental patterns, sometimes worth \$25. One paint and three whites, or *vice versa*, score nothing; two of each score one; four alike score four. The thrower keeps on throwing until he makes a blank throw, when another takes the dice. When all the players have stood their turn, the one who has scored most takes the stakes, which in this game are generally small, say a "bit."

SALISHAN STOCK.

CLALLAM. Port Gamble, Washington. (Cat. No. 19653, Field Columbian Museum, Chicago.)

Set of four beaver teeth dice, two with straight lines and two with circles. Collected by Rev. Myron Eells.

Mr. Eells writes:

Precisely the same kind are used by the Twana, Puyallup, Snohomish, Chehalis, and Quenint, in fact by all the tribes on Puget Sound. I have obtained them from the Twana and Quenint.

To this list Mr. Eells has added the Cowlitz, Lummi, Skagit, and Squaxon and the Soke of British Columbia.

SNOHOMISH(?)² Tulalip Agency, Washington. (Cat. No. 130990, U.S.N.M.)

Set of four beaver teeth dice (fig. 68).

Two, both lefts, stopped at end and marked on flat side with rings and dots, and two, rights and lefts, both apparently from the same animal, with both sides plain. Twenty-eight radial bones of birds,

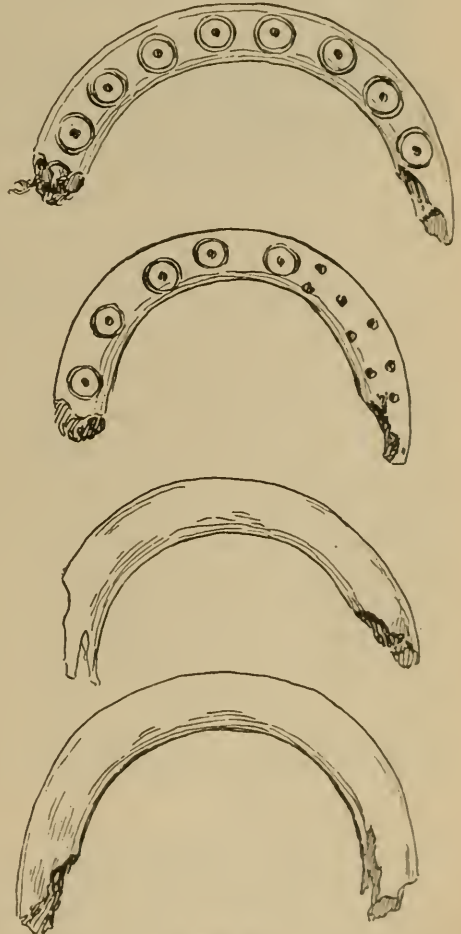


Fig. 68.

BEAVER TEETH DICE.

Length, $1\frac{1}{8}$ to 2 inches.

Snohomish (?) Indians, Tulalip Agency, Washington.

Cat. No. 130990, U.S.N.M.

¹ Contributions to North American Ethnology, Washington, 1877, III, p. 332.

² It is not possible to determine the tribe exactly. The tribes at the Tulalip Agency are given in Powell's Indian Linguistic Families of North America as follows: Snohomish, 443; Madison, 141; Muckleshoot, 103; Swinomish, 227; Lummi, 295.

about 3 inches in length (fig. 69), used as counters. Collected by Mr. E. C. Cherouse. Designated by the collector as a woman's game.

LKU'NGEN (Songish). Vancouver Island, British Columbia.

Dr. Franz Boas¹ gives the following account:

Smētalē', a game of dice, is played with four beaver teeth, two being marked on one of their flat sides with two rows of small circles. They are called "women" (*stā'naē smē-talē'*). The two others are marked on one of the flat sides with cross lines. They are called "men" (*suwē' k'a smētalē'*). One of them is tied with a

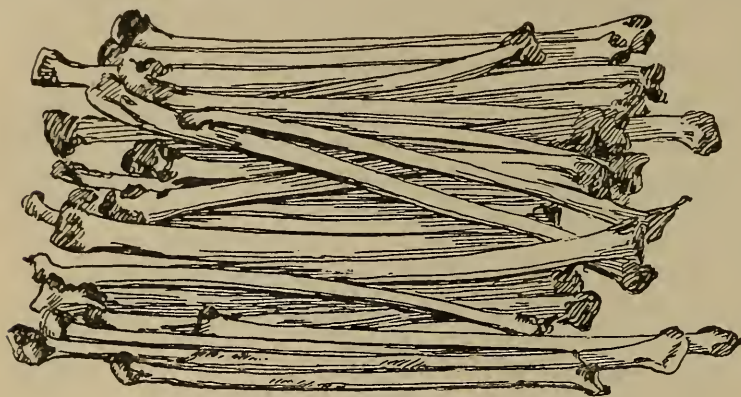


Fig. 69.

GAME COUNTERS. RADIAL BONES OF BIRD.

Length, about 3 inches.

Snohomish (?) Indians, Tulalip Agency, Washington.

Cat. No. 130990, U.S.N.M.

small string in the middle. It is called *iHk' ak' ē' sen*. The game is played by two persons. According to the value of the stakes, thirty or forty sticks are placed between the players. One begins to throw. When all the marked faces are either up or down he wins two sticks. If the faces of the two "men" are up, of the two "women" down, or *vice versa*, he wins one stick. When the face of the *iHk' ak' ē' sen* is up, all others down, or *vice versa*, he wins four sticks. Whoever wins a stick goes on playing. When one of the players has obtained all the sticks he wins the game.

NISQUALLI. Washington.

Mr. George Gibbs² states:

The women have a game belonging properly to themselves. It is played with four beaver teeth, *mēh-ta-la*, having particular marks on each side. They are thrown as dice, success depending on the arrangement in which they fall.

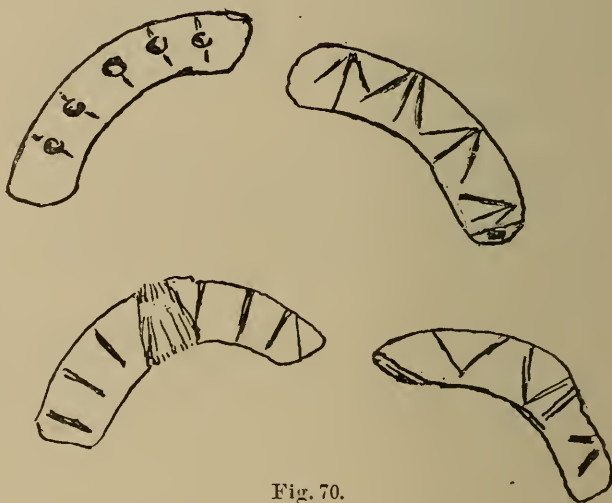


Fig. 70.

SET OF BEAVER TEETH DICE.

Length, 1½ inches.

Thompson River Indians, interior of British Columbia.

Cat. No. 36, American Museum of Natural History.

In his Dictionary of the Nisqualli, the name of the game is given as *mē-ta-la*, *s'me-ta-la*; the highest or four point of the dice, *kēs*.

¹Second General Report on the Indians of British Columbia, Report of the Sixtieth meeting of the British Association for the Advancement of Science, Leeds, 1890, London, 1891, p. 571.

²Contributions to North American Ethnology, I, p. 206.

NSLAKYAPAMUK (Niakapamux).

Thompson River Indians, interior of British Columbia. (Cat. No. $\frac{16}{993}$, Amer. Mus. of Nat. Hist., New York.)

Set of four beaver teeth dice (fig. 70); one, partly split, wrapped with sinew. Marked on one face with lines and dots. Opposite sides plain. Collected by Mr. James Teit.

SHOOSHWAP. British Columbia.

Dr. Boas¹ states they play the game of dice with beaver teeth.

TWANA. Washington.

Rev. M. Eells writes:²

The dice are made of beavers' teeth generally, but sometimes from muskrats' teeth. There are two pairs of them, and generally two persons play, one on each side, but sometimes there are two or three on each side. The teeth are taken in one hand and thrown after the manner of dice. One has a string around the middle. If this one is down and all the rest are up, or up and the rest down, it counts four; if all are up or down, it counts two; if one pair is up and the other down it counts one; if one pair is up or down and the other divided, unless it be as above, when it counts four, then it counts nothing; 30 is a game, but they generally play three games, and bet more or less, money, dresses, or other things. They sometimes learn very expertly to throw the one with the string on differently from the others, by arranging them in the hand so they can hold this one, which they know by feeling, a trifle longer than the others.

SHAHAPTIAN STOCK.

KLICKITAT. Washington. (Cat. No. 20955, Mus. Arch., Univ. Penn.)

Three beaver teeth dice, two marked with five circles with central dot and one with chevrons on flat side. All have ends wrapped with sinew to prevent splitting. One with circles and one with chevrons wrapped about the middle with sinew. Collected by Mr. A. B. Averill.

SHOSHONEAN STOCK.

COMANCHE. Kiowa Reservation, Indian Territory. (Cat. No. 152911a, U.S.N.M.)

Set of six bone dice, having both faces convex, and bearing on one face incised designs (fig. 71) filled with red paint. The reverses are plain, with the exception of the third from the left, which has a cross inscribed upon the back. The device on the face of this die was intended to represent the head of a buffalo, which is more plainly delineated upon one of the Mandan dice (fig. 81). Two of the plum stones in the Sioux game described by Colonel McChesney (p. 760) have a buffalo head on one side, opposite to which is a cross. Collected by Mr. James Mooney, 1891. Described by the collector as played by women, and shaken up in a basket.

COMANCHE. Kiowa Reservation, Indian Territory. (Cat. No. 152911b, U.S.N.M.)

Set of six bone dice with designs like those on the preceding, but

¹ Second General Report on the Indians of British Columbia, p. 641.

² Bulletin, U. S. Geological and Geographical Survey, III, No. 1, p. 89.

painted green instead of red (fig. 72). Collected by Mr. James Mooney, 1891.

PAIUTE. South Utah. (Cat. No. 9411, Peabody Museum.)

Fourteen strips of cane $5\frac{5}{8}$ inches long and in width, with the inner, curved sides painted red (fig. 73). Said to be used upon the dice principle, the red sides only being counted. Collected by Mr. Edward Palmer.

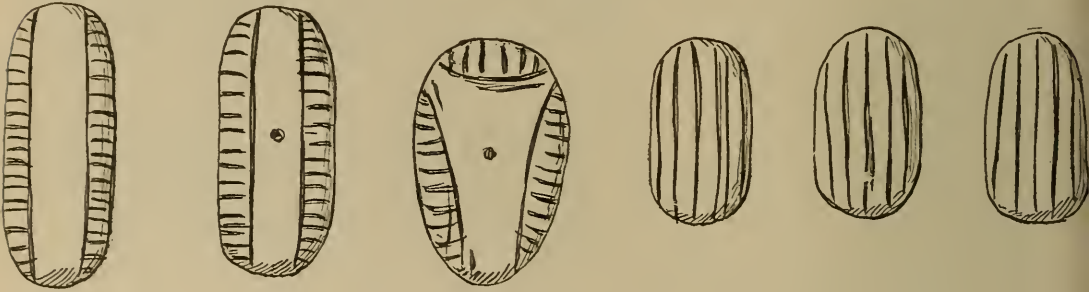


Fig. 71.

SET OF BONE DICE.

Lengths, $1\frac{1}{4}$ to $1\frac{3}{4}$ inches.

Comanche Indians, Indian Territory.

Cat. No. 152911a, U.S.N.M.

PAIUTE. Pyramid Lake, Nevada. (Cat. No. 19054, U.S.N.M.)

Set of twelve sticks of grease wood ¹ $1\frac{3}{4}$ inches in length, $\frac{5}{16}$ inch in breadth, and $\frac{1}{8}$ inch in thickness (fig. 74). Both sides rounded, the outer painted red and the inner unpainted. Collected by Stephen Powers. Described by the collector as women's gambling sticks.

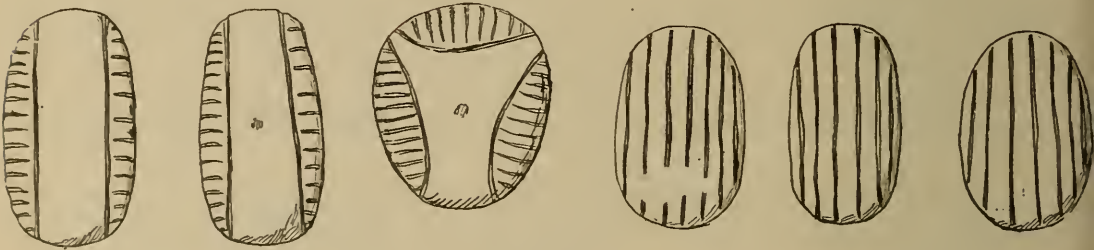


Fig. 72.

SET OF BONE DICE.

Lengths, $1\frac{3}{4}$ and $1\frac{1}{2}$ inches.

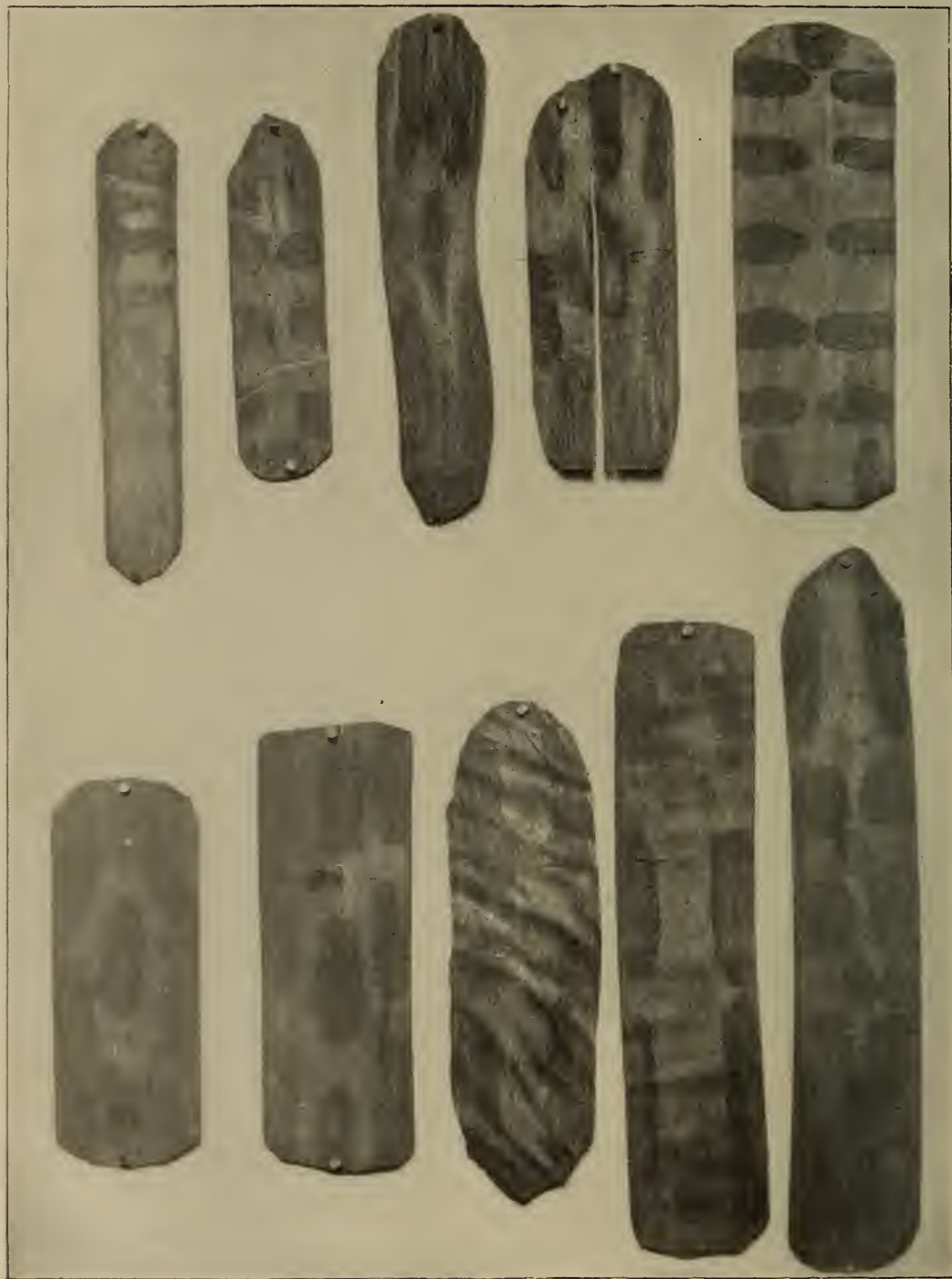
Comanche Indians, Indian Territory.

Cat. No. 152911b, U.S.N.M.

SHOSHONE. Fort Hall Agency, Idaho. (Cat. No. 22285, U.S.N.M.)

Set of four sticks 10 inches in length, $\frac{7}{16}$ inch in breadth, and $\frac{3}{16}$ inch in thickness; rectangular in section (fig. 75). Made from grooved box boards, which Mr. Cushing pointed out to the writer were used as a substitute for split canes. Burned on inner grooved side with four transverse marks, two near each end. Collected by William H. Danilson.

¹*Larrea Mexicana.*



BARK TABLETS THROWN AS DICE.

Length, 5 to 10 inches.

Uinkaret Indians, Utah.

Cat. No. 11217, U.S.N.M.

UINKARET.¹ Arizona. (Cat. No. 11217, U.S.N.M.)

Ten flat pieces of cedar bark (Plate 11), rectangular, with rounded corners, from 5 to 10 inches in length and $1\frac{1}{8}$ to $2\frac{1}{4}$ inches in width. Inner,

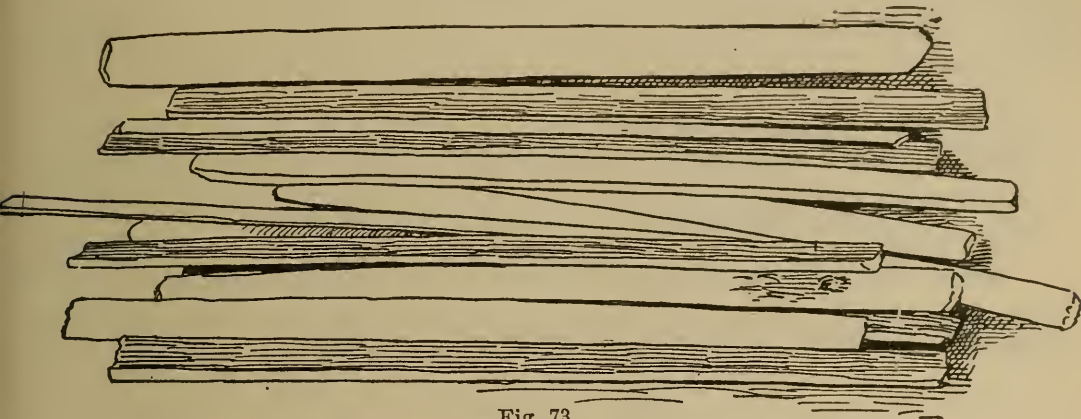


Fig. 73.

GAMING CANES.

Length, $5\frac{5}{8}$ inches.

Paite Indians, southern Utah.

Cat. No. 9411, Peabody Museum of American Archaeology.

smooth sides marked with blotches of red paint; reverse plain. Collected by Maj. J. W. Powell, who has kindly furnished me with the following information concerning them:

They were used as dice, but the method of counting I do not now remember. In fact, there were peculiarities in the count which I never quite mastered, but I remem-

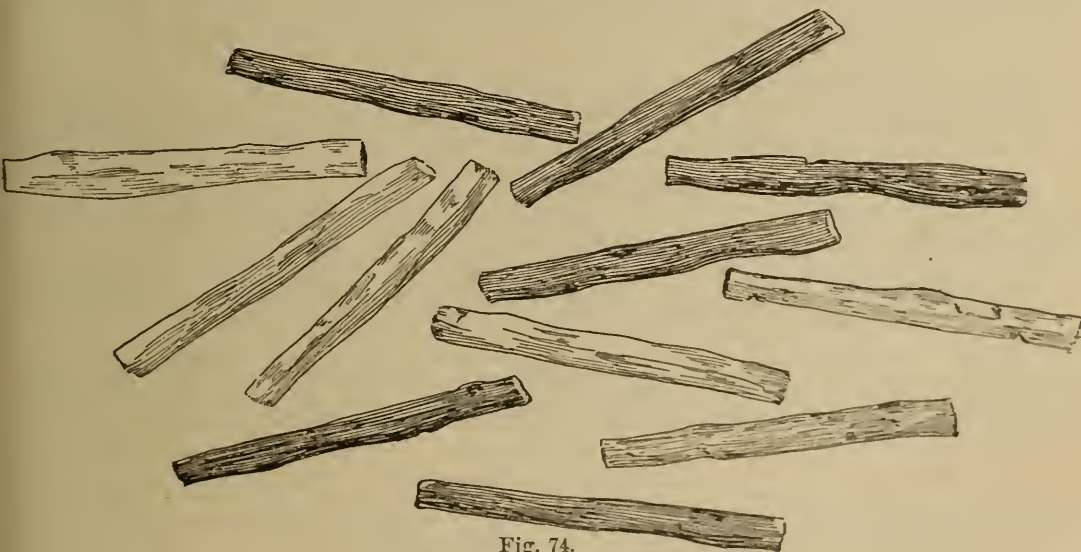


Fig. 74.

SET OF STICKS FOR GAME.

Length, 23 inches.

Paite Indians, Nevada.

Cat. No. 19051, U.S.N.M.

¹ Mr. Frederick W. Hodge informs me that the Uinkaret formed a division of the Paite, and in 1873-74 lived in mountains of the same name in Northern Arizona. "Their population at that time was only 401, and I have no doubt they are officially recognized as Paite proper. The name means 'Where the pine grows.' Powell is the only one who has mentioned them, as he is practically the only student who has studied this branch of the Shoshonean tribes."

ber that I was satisfied that every piece represented a region. The bark cards were shuffled by tossing them in a little tray basket, or *kaichoats*, sometimes used by the women as caps, but having a more general use as gathering baskets. They were shaken up under the concealment of a blanket and tossed upon another blanket, and different arrangement produced different numbers, which were counted upon little sticks. Each party in the game started with a definite number of these sticks, and the final winner was the one who accumulated all in his pile.

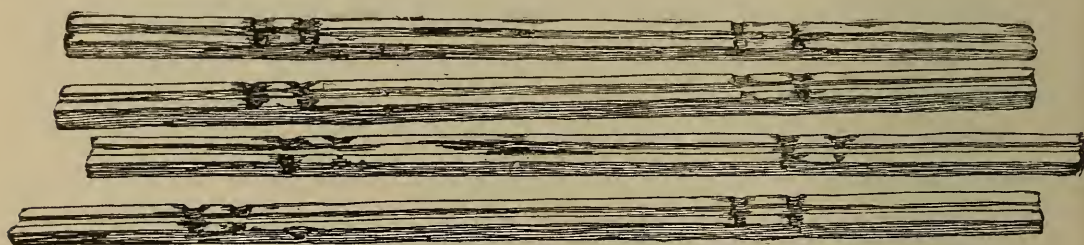


Fig. 75.

SET OF STAVES FOR GAME.

Length, 10 inches.

Shoshoni Indians, Fort Hall Agency, Idaho.

Cat. No. 22285, U.S.N.M.

SIOUAN STOCK.

ASSINABOIN. Dakota. (Cat. No. 8498, U.S.N.M.)

Set of four sticks of polished hickory 15½ inches in length, about 1 inch in breadth in center, tapering to ¾ inch at ends, and ⅛ inch in thickness. Two are burned on one side with war calumets, or tomahawks, and with crosses (stars?) at each end, and two each with four



Fig. 76.

SET OF STAVES FOR GAME.

Length, 15½ inches.

Assinaboin Indians, Dakota.

Cat. No. 8498, U.S.N.M.

bear tracks, with stripes of red paint between (fig. 76). Opposite sides plain. Ends rounded, one notched and tied with sinew to prevent splitting. Collected by Dr. J. P. Kimball.

ASSINABOIN. Upper Missouri.

In a report to Hon. Isaac I. Stevens, Governor of Washington Territory, on the Indian tribes of the Upper Missouri, by Mr. Edwin T.

Denig, a manuscript¹ in the library of the Bureau of American Ethnology, there occurs the following accounts of the bowl and stave game among the Assinaboin:

Most of the leisure time, either by night or by day, among all these nations is devoted to gambling in various ways, and such is their infatuation that it is the cause of much distress and poverty in families. For this reason the name of being a desperate gambler forms a great obstacle in the way of a young man getting a wife. Many quarrels arise among them from this source, and we are well acquainted with an Indian who a few years since killed another because after winning all he had he refused to put up his wife to be played for. Every day and night in the soldier's lodge not occupied by business matters presents gambling in various ways all the time; also in many private lodges the song of hand gambling and the rattle of the bowl dice can be heard.

Women are as much addicted to the practice as men, though their games are different, and not being in possession of much property their losses, although considerable to them, are not so distressing. The principal game played by men is that of the bowl, or *cosso-ó*, which is a bowl made of wood with flat bottom 1 foot in diameter or less, the rim turned up about 2 inches, and highly polished inside and out. A drawing and a description of the arithmetical principles of this game is now attached in this place. The manner of counting therein mentioned is the manner in which we learned it from the Indi-

ans, but the value of each of the articles composing the dice can be and is changed sometimes in default of some of them being lost, and again by agreement among the players in order to lengthen or shorten the game or facilitate the counting. However, the best and most experienced hands play it as it is represented. It can be played between two or four; that is, either one on each side or two against two. The game has no limit unless it is so agreed in the commencement, but this is seldom done, it being usually understood that the players continue until one party is completely ruined.

The dice and their counts [fig. 77] are as follows:

One large crow's claw, red on one side and black on the other, being the only one that will occasionally stand on end, in which case twenty-five for it is counted, besides its value of five when on its side.

Four small crow's claws, painted the same as the large one, which count five each if the red side turns up; if the black, nothing.

Five plum stones, black on one side and scraped white on the other; the black sides turned up are valued at four each; the white sides nothing.

Five small round pieces of blue china, $\frac{1}{2}$ inch in diameter, which count three each for the blue side; the white side nothing.

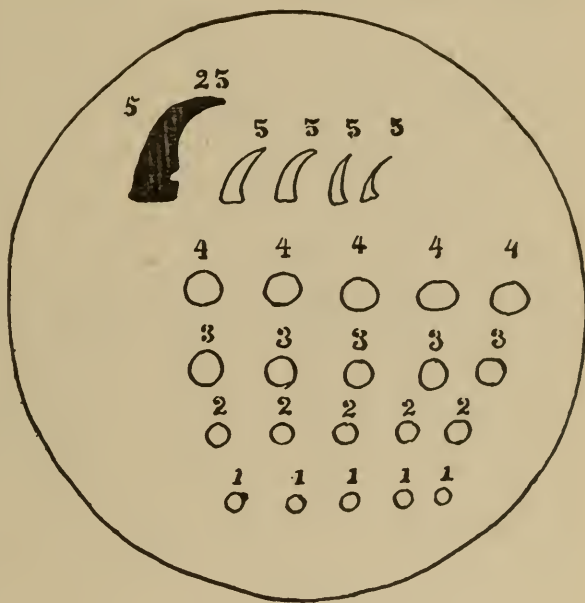


Fig. 77.

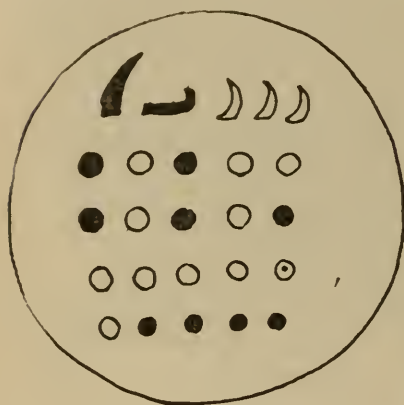
ASSINABOIN BOWL GAME.

From a sketch by Edwin T. Denig.

¹ Kindly loaned to the writer by the librarian of the Bureau, Mr. Frederick Webb Hodge.

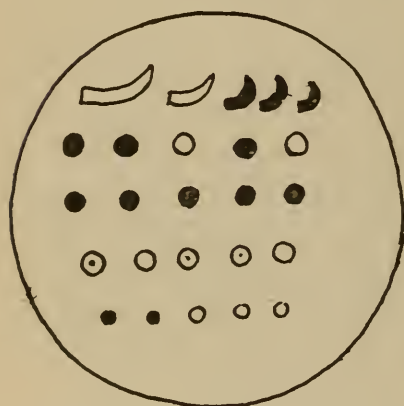
Five vest buttons, the eyes filed off; the eye side turned up counts two each; the smooth side nothing.

Five heads of brass tacks; the concave side turning up counts one each; the convex side nothing.



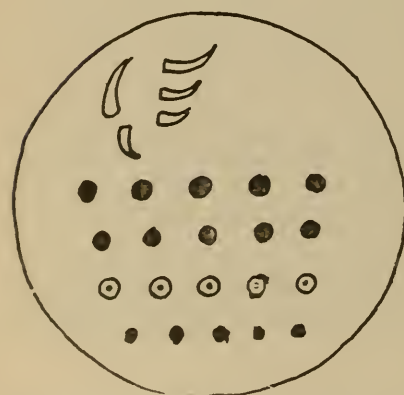
First Throw:

Big claw on end, 30, and 3 red claws, 15	= 45
2 burnt sides up, nothing	= 0
3 blue sides up, 3 each	= 9
1 eye side up, nothing	= 0
4 concaves up, 1 each	= 4
	58



Second Throw:

2 red, none on end, nothing by claws	= 0
3 burnt sides up, 4 each	= 12
5 blue sides up, 3 each	= 15
3 eye sides up, 2 each	= 6
2 concaves, nothing by tacks	= 0
	33



Third Throw:

N. B.—This is the best throw that can be made and takes all the stakes when the game does not exceed 100.

Big claw on end, 30, all the rest red, 20	= 50
5 burnt sides up, 4 each	= 20
5 blue sides up, 3 each	= 15
5 eye sides up, 2 each	= 10
5 concave tacks, 1 each	= 5
	100

Fig. 78.

COUNTS IN ASSINABOIN BOWL GAME.

From a sketch by Edwin T. Denig.

The bowl is held by the tips of the four fingers inside the rim, and the thumb underneath. The dice being put in, they are thrown up a few inches by striking the bottom of the bowl on the ground, so that each counter makes several revolutions. It is altogether a game of chance, and no advantage can be taken by anyone in making the throws. The counters or dice never leave the bowl, but are counted as the value turns up according to the plate inserted in this place describing the same. One person having shaken it and the amount of his throw having been ascertained, a requisite number of small sticks are placed before him, each stick counting one.

In this way the game is kept, but each keeps his adversary's game, not his own; that is, he hands him a number of sticks equal to the amount of his throw, which are laid so that all can see them. Each throws in turn unless the big claw stands on end, in which case the person is entitled to a successive throw. By much practice they are able to count the number turned up at a glance, and the principles of the game being stated on the drawing we will now describe how it is carried on. It has been observed in these pages, in references to their gambling, that it is much fairer in its nature than the same as carried on by the whites, and this is worthy of attention, inasmuch as it shows how the loser is propitiated, so that the game may not result in quarrel or bloodshed, as is often the case. The game is mostly played by the soldiers and warriors, and each must feel equal to the other in courage and resolution: it is often kept up for two or three days and nights without any intermission, except to eat, until one of the parties is ruined.

Example.—A plays against B; each puts up a knife, and they throw alternately until 100 is counted by dice; say A wins. B now puts up his shirt against two knives, which is about equal in value; say A wins again. B then stakes his powderhorn and some arrows against the whole of A's winnings. Should B now win, the game commences again at the beginning, as A would only have lost a knife; but, supposing A wins, B now puts up his bow and quiver of arrows against all A has won. The stakes are never withdrawn but let lie in front of them. Say A again wins. B then stakes his blanket and leggings, which are about equal in value to all A has won, or, if not, it is equalized by adding or subtracting some article. Supposing A again to be winner, he would then be in possession of 2 knives, 1 shirt, 1 blanket, 1 powderhorn, 1 bow and quiver of arrows, and 1 pair leggings, the whole of which the Indians value at 8 robes. B now stakes his gun against all the above of A's winnings; now if A again wins, he only retains the gun, and the whole of the rest of the property won by A returns to B, but he is obliged to stake it all against his gun in possession of A, and play again. If A wins the second time, he retains the whole, and B now puts up his horse against all of A's winnings, including gun. If A wins, he retains only the horse, and the gun and everything else revert again to B, he being obliged to stake them again against the horse in A's possession. If A wins this time, he keeps the whole, but if B wins he only gets back the horse and gun, and all the rest of the property goes to A. Supposing B again loses and continues losing until all his personal property has passed into the hands of A, then B, as a last resort, stakes his wife and lodge against all his property in the hands of A. If A wins, he only keeps the woman; the horse, gun, and all other property returns again to B, with the understanding, however, that he stake it all to get back his wife. Now if B loses, he is ruined, but if A loses he gives up only the woman and the horse, continuing to play with the rest of the articles against the horse until one or the other is broke.

At this stage of the game the excitement is *very* great. The spectators crowd around and intense fierceness prevails. Few words are exchanged, and no remarks made by those looking on. If the loser be completely ruined and a desperate man, it is more than likely he will by quarrel endeavor to repossess himself of some of his property, but they are generally well matched in this respect, though bloody struggles are often the consequence. We have known Indians to lose *everything*, horse, dogs, cooking utensils, lodge, wife, even to his wearing apparel, and be obliged to beg an old skin from someone to cover himself, and seek a shelter in the lodge of one of his relations. It is, however, considered a mark of manliness to suffer no discomposure to be perceptible on account of the loss, but in most cases we imagine this a restraint forced upon the loser by the character of his adversary. Suicide is never committed on these occasions. His vengeance seeks some other outlet—in war expeditions, or some way to acquire property that he may again play and retrieve his losses. There are some who invariably lose and are poor all their lives. A man may with honor stop playing with the loss of his gun. He has, also, a second opportunity to retire on losing his horse, and when this is so understood at the commence-

ment they do; but when a regular set-to takes place between two soldiers, it generally ends as above described.

The usual game which women play alone—that is, without the men—is called *Chun-kan-dee*, and is performed with by four sticks marked on one side and blank on the other, as described in the inclosed plate. The women all sit in a circle around the edge of some skin spread upon the ground, each with her stake before her. One of them gathers up the sticks and throws them down forcibly on the end, which makes them bound and whirl around. When they fall the number of the throw is counted, as herein stated. The implements (fig. 79) are four sticks, 12 inches long, flat, and rounded at the ends, about 1 inch broad and $\frac{1}{8}$ thick. Two of them have figures of snakes burned on one side and two the figure of a bear's foot.



Fig. 79.

SET OF GAMING STICKS.

Length, 12 inches.

Assinaboin Indians, Upper Missouri.

From a sketch by Edwin T. Denig.

All the sticks are white on the opposite side.

2 painted or marked sides and 2 white counts.....	2
All the white sides turned up counts.....	10
3 burnt sides up and 1 white count..	0
(N. B.—Three white sides up and 1 burnt counts nothing.)	
4 burnt sides up counts.....	10

Each throws in turn against all others, and if the whole of the marked sides or all the fair sides of the sticks are turned up, she is entitled to a successive throw. The game is forty, and they count by small sticks as in the preceding. In fine weather many of these gambling circles can be seen outside their lodges, spending the whole day at it, instead of attending to their household affairs. Some men prohibit their wives from gambling, but these take the advantage of their husbands'

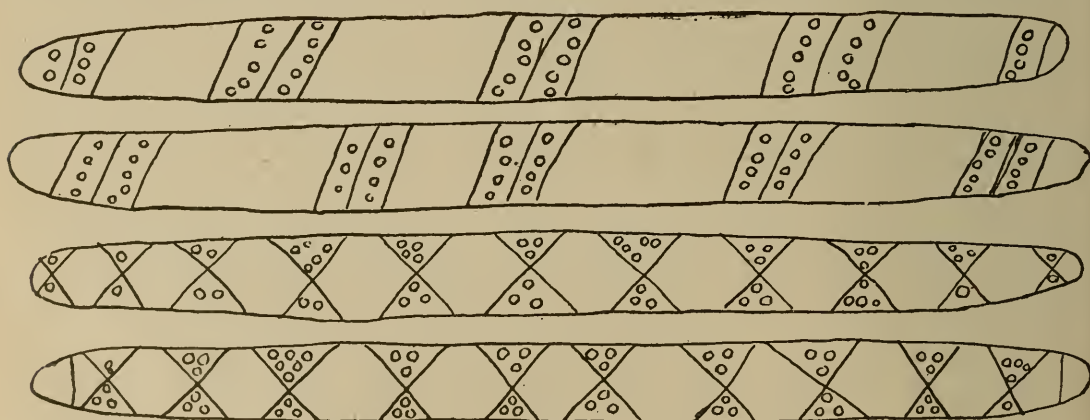


Fig. 80.

SET OF BONE GAMING STAVES.

Length, $8\frac{1}{2}$ inches.

Gros Ventres Indians, Dakota.

Cat. No. 8425, U.S.N.M.

absence to play. Most of the women will gamble off everything they possess, even to the dresses of their children, and the passion appears to be as deeply rooted in them as in the men. They frequently are thrashed by their husband for their losses and occasionally have quarrels among themselves as to the results of the game.

GROS VENTRES. Dakota. (Cat. No. 8425, U.S.N.M.)

Set of four bone staves made from cores of elk horn, $8\frac{1}{2}$ inches in length, $\frac{11}{16}$ inch in width in middle, and about $\frac{1}{16}$ inch thick. The outer

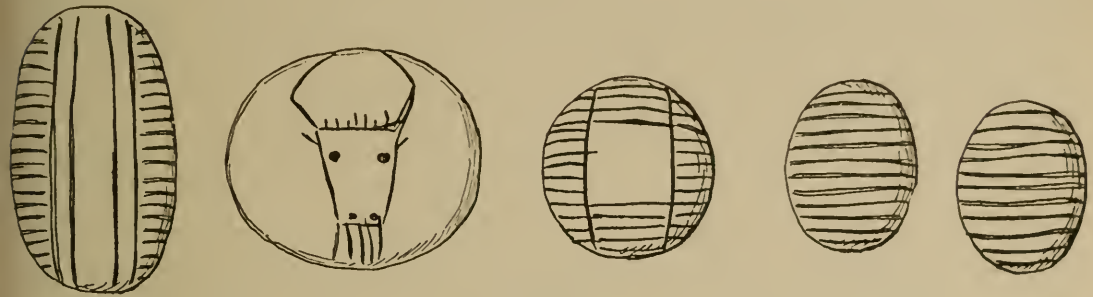


Fig. 81.

SET OF BONE DICE.

Lengths, $1\frac{1}{2}$, $1\frac{5}{16}$, and 1 inch.

Mandan Indians, Fort Berthold, North Dakota.

Cat. No. 8427, U.S.N.M.

rounded face of the bone is marked with lines and dots, filled in with faint red paint, as shown in fig. 80, there being two pairs marked alike. Opposite, unmarked and showing texture of bone. Ends rounded. Collected by Dr. Washington Matthews, U. S. A. Described as

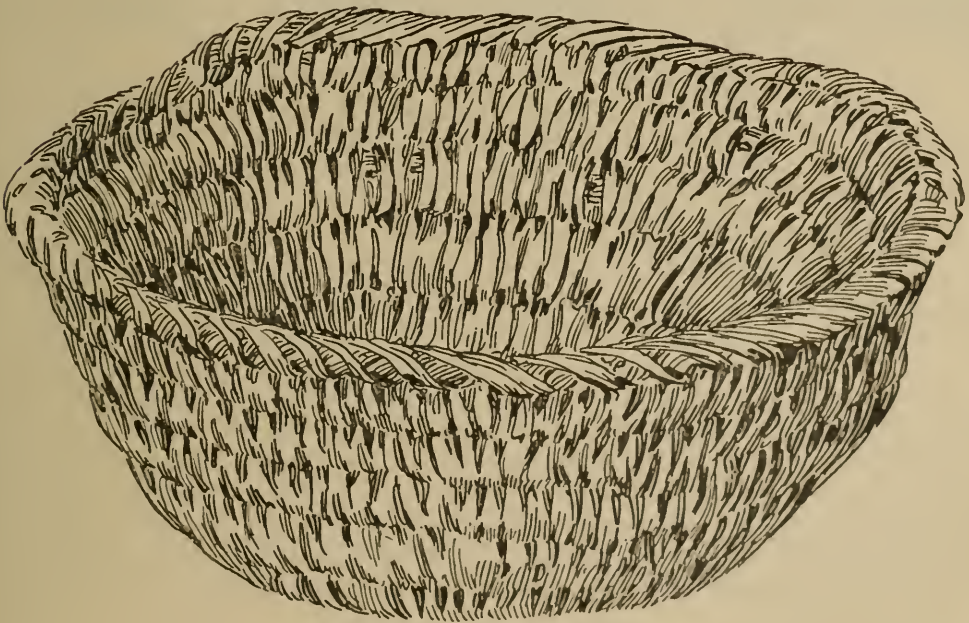


Fig. 82.

BASKET FOR DICE GAME.

Diameter, $7\frac{1}{2}$ inches.

Mandan Indians, Fort Berthold, North Dakota.

Cat. No. 8427, U.S.N.M.

women's gambling instruments. Dr. Matthews states in a private letter to the writer that these bone staves were not thrown so as to rebound, but gently, ends down, on a blanket.

IOWA.

Catlin¹ describes a game among the Iowa under the name of *Kon-tho-gra* ("Game of Platter").

This is the fascinating game of the women, and exclusively their own, played with a number of little blocks of wood the size of a half-crown piece, marked with certain points for counting the game, to be decided by throws, as they are shaken into a bowl and turned out on a sort of pillow. The bets are made after the bowl is turned, and decided by the number of points and colors turned.

MANDAN. Fort Berthold, North Dakota. (Cat. No. 8427, U.S.N.M.)

Set of five bone dice with incised designs (fig. 81) filled in with red paint, and basket of woven grass (fig. 82) 7½ inches in diameter at top and 3 inches deep. With the dice is a small clay effigy, 1¼ inches in length, with legs outspread, and with arms and head missing (fig. 83). Collected by Dr. Washington Matthews, U. S. A.

Catlin² mentions the game of the platter among the Mandan.

OMAHA.

Dr. J. Owen Dorsey³ gives the following account under the name of "Plum-stone Shooting," *Ȳa^{n'}-si kide*:⁴



Fig. 83.

CLAY FETICH USED
IN DICE GAME.

Length, 1¼ inches.

Mandan Indians,
Fort Berthold,
North Dakota.

Cat. No. 8427, U.S.N.M.

Five plum-stones are provided, three of which are marked on one side only with a greater or smaller number of black dots or lines and two of them are marked on both sides; they are, however, sometimes made of bone of a rounded or flattened form, somewhat like an orbicular button-mold, the dots in this case being impressed. A wide dish and a certain number of small sticks by way of counters are also provided. Any number of persons may play this game, and agreeably to the number engaged in it is the quantity of sticks or counters. The plum-stones or bones are placed in a dish, and a throw is made by simply jolting the vessel against the ground to make the seeds or bones rebound, and they are counted as they lie when they fall. The party plays around for the first throw. Whoever gains all the sticks in the course of the game wins the stake. The throws succeed each other with so much rapidity that we vainly endeavor to observe their laws of computation, which it was the sole business of an assistant to attend to. The seeds used in this game are called *Ȳa^{n'}-si gě*. Their number varies. Among the Ponka and Omaha only five are used, while the Oto play with six. Sometimes four are marked alike, and the fifth is black or white (unmarked). Generally three are black on one side and white or unmarked on the other, while two have each a star on one side and a moon on the other. The players must always be of the same sex and class; that is, men must play men, youths with youths, and women with women. There must always be an even number of players, not more than two on each side. There are about twenty

¹Thomas Donaldson, The George Catlin Indian Gallery, Report of the Smithsonian Institution, 1885, p. 152.

²Letters and Notes on the Manners, Customs, and Conditions of the North American Indians, London, 1841, I, p. 132.

³Omaha Sociology, Third Annual Report of the Bureau of Ethnology, Washington, 1884, p. 334.

⁴Miss Alice C. Fletcher gives me the name of the game as *gkon-thi*. *Gkon* is the first syllable of the word *gkoñ-de*, "plum;" *thi* means seed. The game is described by Maj. S. H. Long (Account of an Expedition from Pittsburg to the Rocky Mountains, I, p. 215) under the name of *Kon-se-ke-da*.

sticks used as counters. These are made of *deska*, or of some other grass. The seeds are put in a bowl, which is hit against a pillow and not on the bare ground, lest it should break the bowl. When three seeds show black and two have the moon on the upper side it is a winning throw, but when one is white, one black, the third black (or white), the fourth showing a moon, and the fifth a star, it is a losing throw. The game is played for small stakes, such as rings and necklaces.

Fig. 84 represents a set of plum-stones from the Omaha, collected by Miss Alice C. Fletcher. Two have a star on one side and a crescent moon on the other, the device being in white on a burnt ground, and three white or plain on one side and black on the other. They were accompanied by a hemispherical bowl made of walnut, 12 inches in diameter, of perfect form and finish, and about one hundred slips of the stalks of the blue joint grass, about 12 inches in length, used as counters.

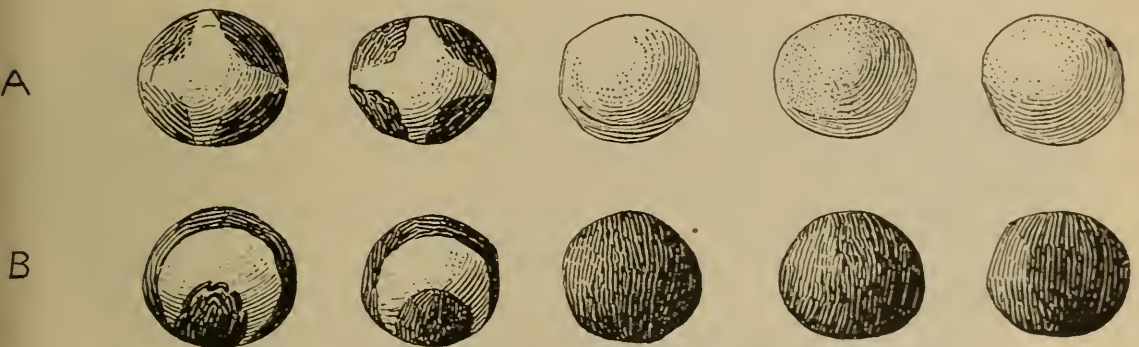


Fig. 84.

SET OF PLUM STONES FOR GAME.

(A, obverse; B, reverse.)

Diameter, $\frac{3}{4}$ inch.

Omaha Indians.

In the possession of Miss Alice C. Fletcher.

DAKOTA SIOUX. South Dakota. (Cat. No. 153365, U.S.N.M.)

Set of seven plum-stones, plain on one side and with marks burnt upon the other. Collected by Dr. Z. T. Daniel,¹ who describes the game as follows under the name of *Kansu*:

This is a very ancient game of the Sioux Indians, played usually by elderly women, although young women and men of all ages play it. *Kansu* is an abbreviation of *kanta su*, which means plum-seed. They drop the *ta* and call the game *kansu*, because it is played with plum-seeds. It is used for gambling and amusement and is more like our dice than any other of our games. When playing, the seeds are thrown up in a basket or bowl and the markings on the seeds that are up or down decide the throw.

The seeds used are those of the wild plum of the Dakotas and indigenous throughout the northwest region of the United States generally. They are seven in number. On one side they are all perfectly plain and of the natural color, except some fine marks on four to distinguish them when the burnt sides are down, but on the reverse side of all there are burnt markings. These markings are made by a piece of hot iron, such as a nail, the blade of a knife, or a piece of hoop iron. Before the natives used iron they used a hot stone. Six of the seeds are in pairs of three different kinds, and only one is of a different marking from all the others. One pair is

¹ *Kansu*, a Sioux game, *The American Anthropologist*, V, p. 215.

scorched entirely on one side, another pair has an unburnt line about 2 millimeters wide traversing their longitudinal convexity (the remainder of their surfaces on that side being scorched); the remaining pair have one-half of one side burnt longitudinally, the other half of the same side unburnt, but traversed by three small burnt lines equidistant about 1 millimeter wide running across their short axes. The remaining and only single seed has an hourglass figure burnt on one side, the contraction in the figure corresponding to the long diameter of the seed. They are all of the same size, about 16 millimeters long, 12 wide, and 7 thick, and are oval, having the outlines and convexity on each side of a diminutive turtle shell. When the Sioux first obtained our ordinary playing cards they gave to them, as well as to the game, the name *kansu*, because they were used by the whites and themselves for the same purpose as their original *kansu*. The men do not use the seeds or the original *kansu* now, but they substitute our cards. The women, however, do use the game at the present time. When a ration ticket was issued to them they gave it the name of *kansu*, because it was a card; so also to a postal card, business card, or

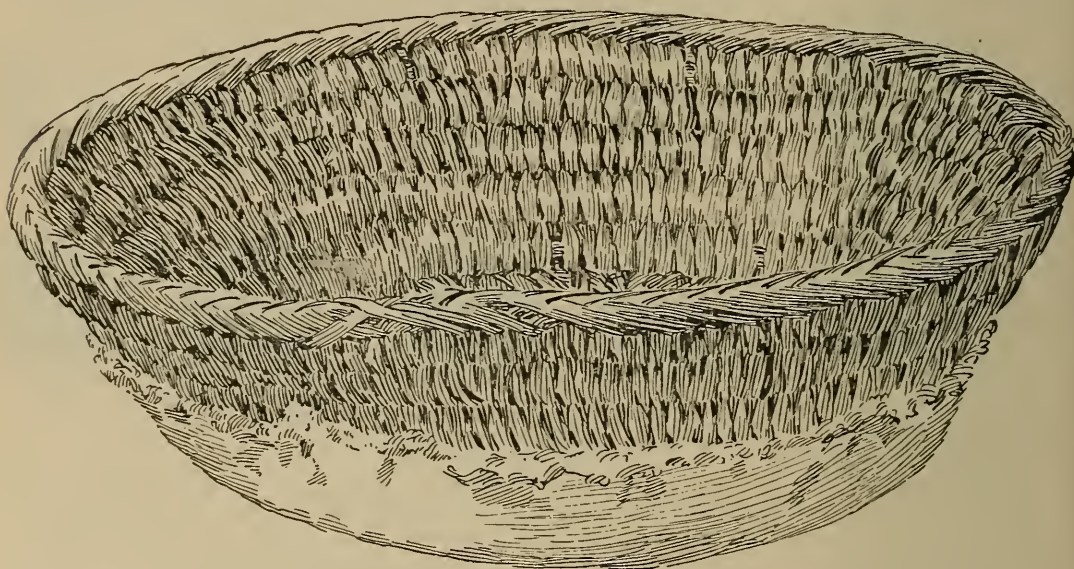


Fig. 85.

BASKET FOR PLUM STONE GAME.

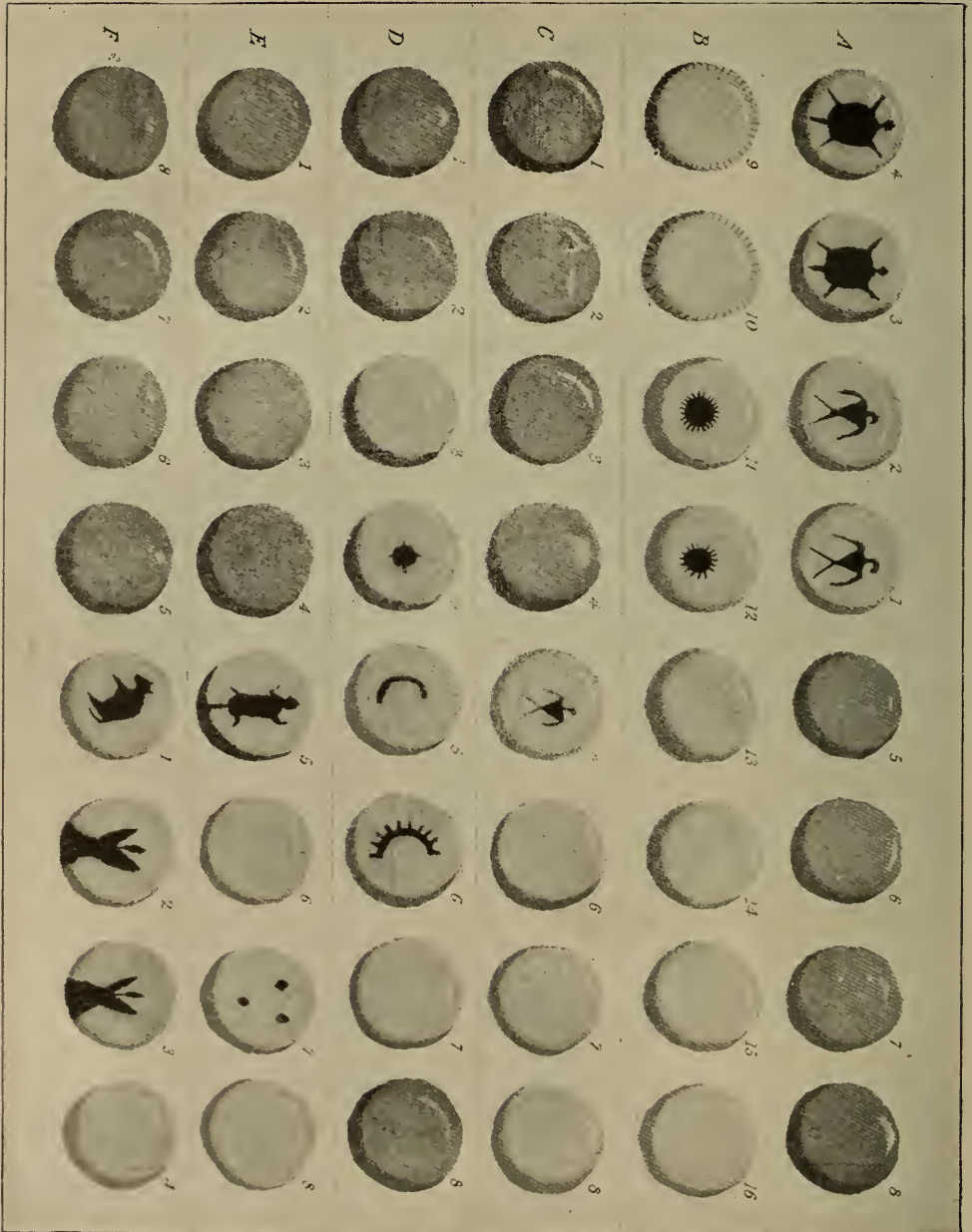
Diameter at top, 8 inches.

Dakota Sioux, South Dakota.

Cat. No. 10443, Museum of Archaeology, University of Pennsylvania.

anything of the description of a card or ticket; a railroad, street-car, milk, store, or circus ticket would be called a *kansu*; so that the evolution of this term as applied to a ticket is a little interesting.

The description of the game *kansu*, as related by the Sioux is as follows: Any number of persons may play, and they call the game *kansu kute*, which literally means "to shoot the seeds." When two persons play, or four that are partners, only six of the seeds are used, the hourglass or king *kansu* being eliminated. The king is used when a number over two are playing and each one for himself. The three-line seeds are called "sixes," the one-line "fours," those that are all black "tens." When two play for a wager they each put sixteen small sticks, stones, corn, peas, or what not into a common pile between them, making in all thirty-two. The play begins by putting the seeds into a small bowl or basket and giving it a quick upward motion, which changes the positions of the seeds, then letting them fall back into the receptacle, care being taken not to let any one fall out. The markings that are up decide the throw, precisely on the principle of our dice. As they count, they take from the pile of thirty-two what they make, and when the pile is exhausted the one having the greatest number wins the game. If all the white



CASTS IN SIOUX PLUM STONE GAME.

After Schoolcraft.

sides are up, the throw counts sixteen. The two "tens" up and four whites count sixteen. Two pairs up count six, and the player takes another throw. Two "sixes" down count four. If both "tens" are down, either side symmetrically, it counts ten. If all burnt sides are up, it is sixteen. If both "fours" are down, it is six. If two pairs are up, it counts two. One pair up does not count unless all the others are down. When more than two play, and each for himself, the "king" is introduced. If the king is up and all the others down, the count is sixteen. If they are all up, the count is the same. If two pairs are up, the count is six. If the king is down and the remainder up, the count is sixteen.

(BRULE DAKOTA) SIOUX. South Dakota. (Cat. Nos. 10442, 10443, 16552, Mus. Arch., Univ. Penn.)

Plum-stone dice for game (eleven, apparently belonging to two sets). Basket in which dice are thrown, made of woven grass, 8 inches in diameter at top and $2\frac{1}{4}$ inches deep, with bottom covered with cotton cloth (fig. 85). Set of thirty-two sticks used in counting with above

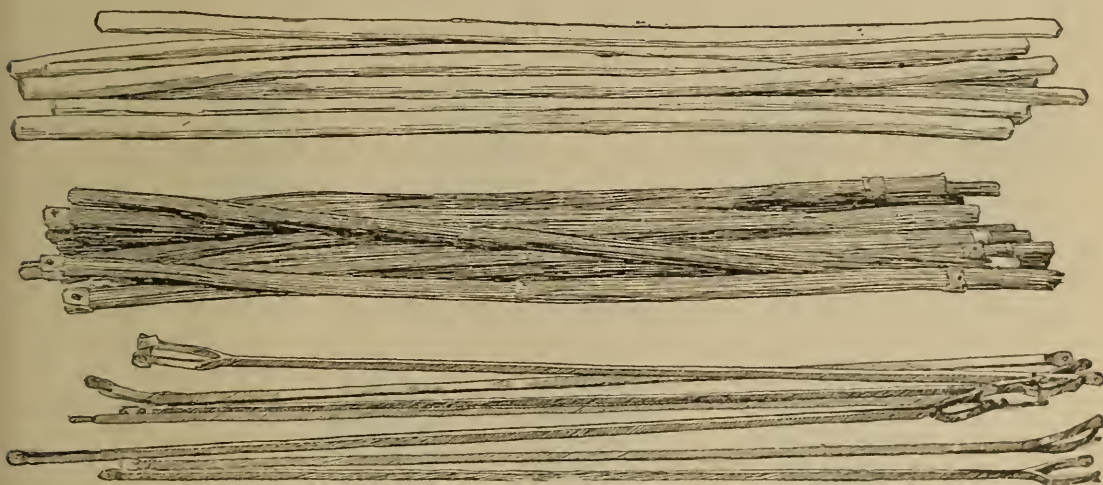


Fig. 86.

COUNTING STICKS FOR PLUM STONE GAME.

Lengths, 13, 12, and 7 inches.

Dakota Sioux, South Dakota.

Cat. No. 16552, Museum of Archaeology, University of Pennsylvania.

(fig. 86), consisting of eleven rounded white sticks about 13 inches in length, fourteen similar black sticks (made of ribs of an old umbrella), about 12 inches in length, and seven iron sticks about 11 inches in length (consisting of iron ribs of the umbrella). Collected by Mr. Horatio N. Rust in 1873.

Comparison of the various accounts of the plum stone game as played by the Sioux shows many variations in the markings on the seeds. This is well illustrated in the account given by Schoolcraft,¹ who describes the game among the Dakota tribes under the name of *Kun-tah-so*, which he translates as "the game of the plum-stones."

He figures five sets of stones, each consisting of eight pieces.

In set A (Plate 12), Nos. 1 and 2 represent sparrow hawks with forked tails, or the fork-tailed eagle, *Falco furcatus*. This is the so-called war eagle. Nos. 3 and 4 are

¹ Information concerning the History, Condition, and Prospects of the Indian Tribes of the United States, Philadelphia, 1853, II, p. 72.

the turtle, which typifies generally the earth. If 1 and 2 fall upwards, the game is won. If but one of these figures fall upwards and at the same time 3 and 4 are up, the game is also won. The other numbers, 5, 6, 7, and 8 are all blanks. B denotes the reversed sides of A, which are all blanks.

Set C shows different characteristics, with a single chief figure (5), which represents the *Falco furcatus*. This throw indicates half a game, and entitles the thrower to repeat it. If the same figure (5) turns up, the game is won. If no success attends it by throwing up the chief figure, the throw passes to other hands. D is the reverse of C and is a blank throw.

In set E, No. 5 represents a muskrat. The three dots (7) indicates two-thirds of a throw, and the thrower can throw again; but if he gets blank the second time, the dish passes on to the next thrower. Set F is invested with different powers. No. 1 represents a buffalo, and 2 and 3 denote chicken hawks, fluttering horizontally in the air. The chief pieces (5, 6, and 7) have the same powers and modifications as A.

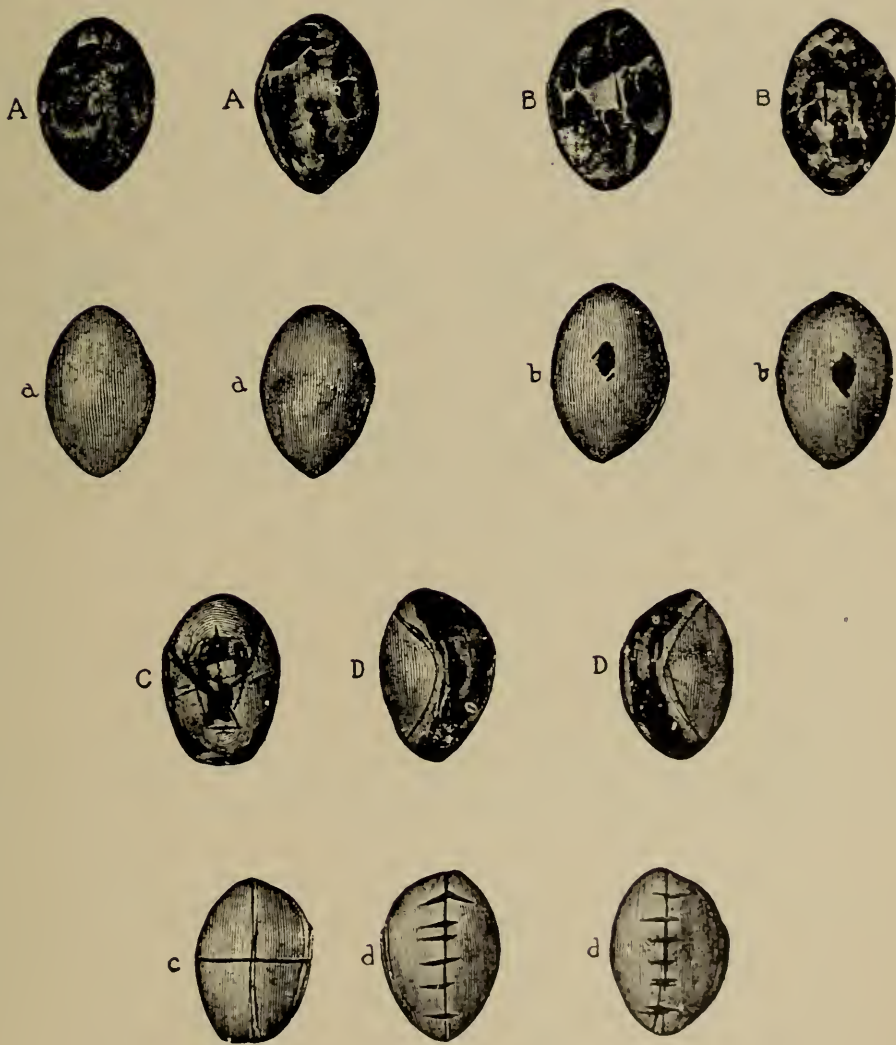
To play this game, a little orifice is made in the ground and a skin put in it. Often it is also played on a robe. The women and young men play this game. The bowl is lifted with one hand about 3 or 4 inches and suddenly pushed down to its place. The plum-stones fly over several times. The stake is first put up by all who wish to play. A dozen can play at once, if it be desirable.

Dr. H. C. Yarrow¹ refers to the plum stone game, in his paper on Indian mortuary customs, as described to him by Dr. Charles E. McChesney, U. S. A., among the Wahpeton and Sisseton (Dakota) Sioux.

After the death of a wealthy Indian the near relatives take charge of the effects, and at a stated time, usually at the time of the first feast held over the bundle containing the lock of hair, they are divided into many small piles, so as to give all the Indians invited to play an opportunity to win something. One Indian is selected to represent the ghost, and he plays against all the others, who are not required to stake anything on the result, but simply invited to take part in the ceremony, which is usually held in the lodge of the dead person, in which is contained the bundle containing the lock of hair. In cases where the ghost himself is not wealthy the stakes are furnished by his rich friends, should he have any. The players are called in one at a time, and play singly against the ghost's representative, the gambling being done in recent years by means of cards. If the invited player succeeds in beating the ghost, he takes one of the piles of goods and passes out, when another is invited to play, etc., until all the piles of goods are won. In cases of men, only the men play, and in cases of women, the women only take part in the ceremony. Before white men came among these Indians and taught them many of his improved vices, this game was played by means of figured plum seeds, the men using eight and the women seven seeds, figured as follows and as shown in plate 13. Two seeds are simply blackened on one side (AA), the reverse (aa) containing nothing. Two seeds are black on one side, with a small spot of the color of the seed left in the center (BB), the reverse side (bb) having a black spot in the center, the body being plain. Two seeds have a buffalo's head on one side (C) and the reverse (c) simply two crossed black lines. There is but one seed of this kind in the set used by women. Two seeds have the half of one side blackened and the rest left plain, so as to represent a half moon (DD); the reverse (dd) has a black longitudinal line crossed at right angles by six small ones. There are six throws whereby the player can win, and five that entitle him to another throw. The winning throws are as follows, each winner taking a pile of the ghost's goods:

Two plain ones up, two plain with black spots up, buffalo's head up, and two half moons up wins a pile. Two plain black ones up, two black with natural spot up, two longitudinally crossed ones up, and the transversely crossed one up wins a pile.

¹Mortuary Customs of the North American Indians, First Annual Report of the Bureau of Ethnology, Washington, 1881, p. 195.



FIGURED PLUM STONES FOR GAMES.
Dakota Sioux.
After Yarrow.

Two plain black ones up, two black with natural spots up, two half moons up, and the transversely cross one up wins a pile. Two plain black ones, two black with natural spot up, two half moons up, and the buffalo's head up wins a pile. Two plain ones up, two with black spots up, two longitudinally crossed ones up, and the transversely crossed one up wins a pile. Two plain ones up, two with black spots up, buffalo's head up, and two long crossed up wins a pile.

The following auxiliary throws entitle to another chance to win: Two plain ones up, two with black spots up, one half moon up, one longitudinally crossed one up, and buffalo's head up gives another throw, and on this throw, if the two plain ones up and two with black spots with either of the half moon or buffalo's head up, the player takes the pile. Two plain ones up, two with black spots up, two half moons up, and the transversely crossed one up entitles to another throw, when, if all the black sides come up excepting one, the throw wins. One of the plain ones up and all the rest with black sides up gives another throw, and the same then turning up wins. One of the plain black ones up with that side up of all the others having the least black in them gives another throw, when the same turning

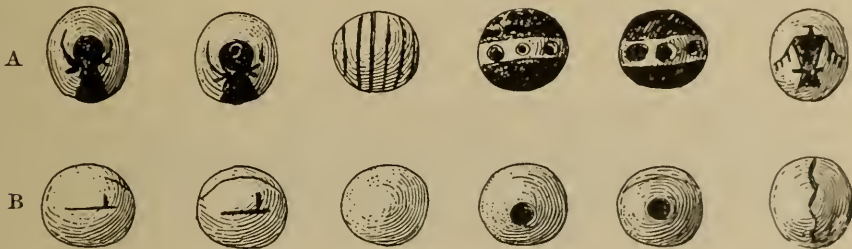


Fig. 87

PLUM STONES FOR GAME.

(A, obverse; B, reverse.)

Diameter, about $\frac{1}{2}$ inch.

Yankton Sioux.

Cat. Nos. 23556, 23557, U.S.N.M.

up again wins. One half moon up with that side up of all the others having the least black on gives another throw, and if the throw is then duplicated it wins. The eighth seed, used by men, has its place in their game whenever its facings are mentioned above.

The permutations of the winning throws may be seen in the following table:

<i>aa</i>	<i>bb</i>	<i>C</i>	<i>DD</i>
<i>AA</i>	<i>BB</i>	<i>c</i>	<i>dd</i>
<i>AA</i>	<i>BB</i>	<i>c</i>	<i>DD</i>
<i>AA</i>	<i>BB</i>	<i>C</i>	<i>DD</i>
<i>aa</i>	<i>bb</i>	<i>c</i>	<i>dd</i>
<i>aa</i>	<i>bb</i>	<i>C</i>	<i>dd</i>

YANKTON SIOUX. Cat. Nos. 23556, 23557, U.S.N.M.

Six plum stone dice, part of two sets of four each (fig. 87). The designs are burnt, and two, the fourth and fifth, have perforations on both sides. Collected by Mr. Paul Beckwith in 1876.

The two dice to the left (fig. 87) bear a buffalo's head on one side and a pipe or calumet on the reverse. The die on the right has an eagle or thunderbird, with the lightning symbol on the reverse.

TAÑOAN STOCK.

TEWA. Santa Clara, New Mexico. Cat. No. 176707, U.S.N.M.

Set of three blocks of wood, $5\frac{1}{4}$ inches in length, 1 inch in breadth, and $\frac{3}{8}$ inch in thickness (fig. 88). Flat and painted red on one side; opposite rounded and painted reddish brown. One stick has fifteen transverse notches painted green on the rounded side. The notches are divided by an incised cross painted yellow.¹

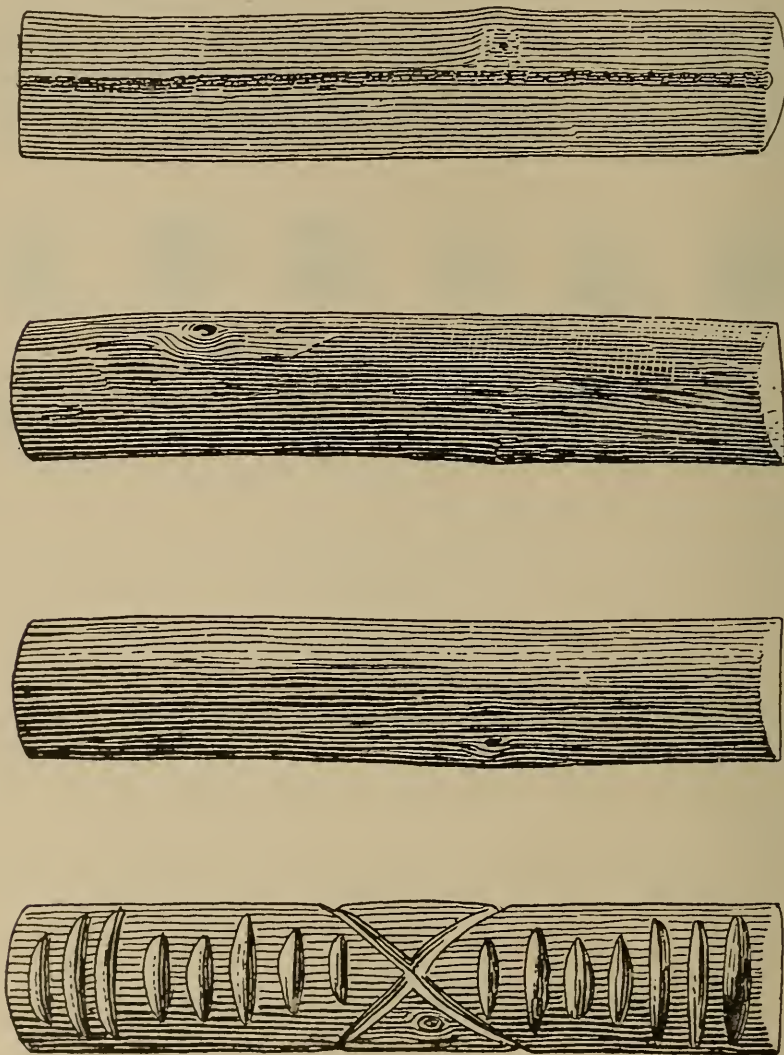


Fig. 88.

BLOCKS FOR GAME OF TUGI-E-PFĚ.

Length, $5\frac{1}{4}$ inches.

Tewa Indians, Santa Clara, New Mexico.

Cat. No. 176707, U.S.N.M.

The following account of the game, from an unpublished manuscript

¹ Another set, collected by Mr. T. S. Dozier, in the Museum of Archaeology of the University of Pennsylvania (Cat. No. 20153), has the notches painted green, red, yellow, and blue and the cross red. These marks appear to imitate wrappings of cord of different colors, probably the wrappings of the *atlatl*.

by the collector, was kindly placed in my hands by Mr. F. Webb Hodge, of the Bureau of American Ethnology:

Grains of corn or pebbles are laid in the form of a square, in sections of ten each. The two players sit on either side. The sticks, called *e-pfe*, are thrown in turn on a stone placed in the square. The counts are as follows:

2 flat and notched stick notches up	= 15	~
3 round sides up	= 10	
3 flat sides up	= 5	
2 flat and 1 round side not notched up	= 3	
1 flat and 2 round sides not notched up	= 1	

The players move their markers between the grains or pebbles according to their throw, going in opposite directions. The one first returning to the starting point wins. This is the ordinary way. Sometimes, the markers being considered as horses, a player will attempt to kill his adversary's horses. In this case he so announces at the commencement of the game, and he then moves his marker in the same direction, and, by duplicating the first throw, or, if at any future stage of the game, always following, he succeeds in placing his marker where his adversary's is, by so doing he kills that horse (marker) and sends him back to the place of beginning. The latter may then elect to move in the same direction as before, and kill and send back his adversary, but, if he wishes, he may go in the opposite direction, in which case he does no killing. The game is called *Tugi-e-pfě*, meaning "the thrown stick" (*tugi* "to throw").

Mr. Dozier states that the stick with fifteen notches gives rise to the Mexican name of *Quince* (fifteen), which is sometimes given its Tewa equivalent *Tadi-pwa-no-pfe*, and *Juego de Pastor* (Shepherd's game).

TEWA. Isleta, New Mexico.

Mr. Charles F. Lummis¹ gives the following account of the game in Isleta:

The boys gather forty smooth stones the size of the fist, and arrange them in a circle about 3 feet in diameter. Between every tenth and eleventh stone is a gate of 4 or 5 inches. These gates are called *p'áy-hlah* (rivers). In the center of the circle, *pa-tól náht-heh*—"pa-tol house," is placed a large cobblestone, smooth and approximately flat on top, called *hyee-oh-tee-áy*. There is your *pa-tól* ground.

The *pa-tol* sticks, which are the most important part of the paraphernalia, are three in number. Sometimes they are made by splitting from dry branches, and sometimes by whittling from a solid block. The chief essential is that the wood be firm and hard. The sticks are 4 to 5 inches long, about an inch wide, and a quarter of an inch thick, and must have their sides flat, so that the three may be clasped together very much as one holds a pen, but more nearly perpendicular, with the thumb and first three fingers of the right hand. Each stick is plain on one side and marked on the other, generally with diagonal notches, as shown in fig. 89.

The only other requisite is a *kah-níd-deh* (horse) for each player, of whom there may be as many as can seat themselves around the *pa-tol* house. The "horse" is merely a twig or stick, used as a marker. When the players have seated themselves, the first takes the *pa-tol* sticks tightly in his right hand, lifts them about as high as his chin, and, bringing them down with a smart vertical thrust, as if to harpoon the center stone, lets go of them when they are within some 6 inches of it. The three sticks strike the stone as one, hitting on their ends squarely, and, rebounding several inches, fall back into the circle. The manner in which they fall

¹ A New Old Game, in A New Mexico David, New York, 1891, p. 183.

decides the "denomination" of the throw, and the different values are shown in fig. 89. Although at first flush this might seem to make it a game of chance, nothing could be farther from the truth. Indeed, no really aboriginal game is a true game of chance; the invention of that dangerous and delusive plaything was reserved for civilized ingenuity.

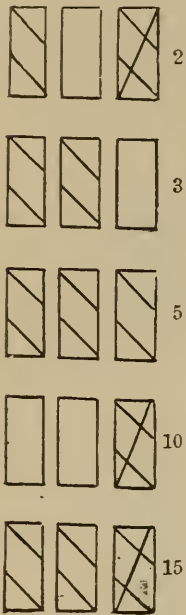


Fig. 89.

COUNTS IN PA-TOL.

From Lummis.

An expert *pa-tol* player will throw the number he desires with almost unfailling certainty by his arrangement of the sticks in his hand and the manner and force with which he strikes them down. It is a dexterity which any one may acquire by sufficient practice, and only thus. The five-throw is deemed very much the hardest of all, and I have certainly found it so.

According to the number of his throw the player moves his marker an equal number of stones ahead on the circle, using one of the "rivers" as a starting point. If the throw is five, for instance, he lays his "horse" between the fourth and fifth stones, and hands the *pa-tol* sticks to the next man. If his throw be ten, however, as the first man's first throw is very certain to be, it lands his horse in the second "river," and he has another throw. The second man may make his starting point the same or another "river," and may elect to run his "horse" around the circle in the same direction that the first is going or in the opposite. If in the same direction, he will do his best to make a throw which will bring his "horse" into the same notch as that of the first man, in which case the first man is "killed," and has to take his "horse" back to the starting point to try over again when he gets another turn. In case the second man starts in the opposite direction—which he will not do unless an expert player—he has to calculate with a good deal of skill for the meeting, "to kill" and to avoid being "killed"

by No. 1. When he starts in the same direction as No. 1, he is behind, and runs no chance of being "killed," while he has just as good a chance to kill. But if, even then, a high throw carries him ahead of the first man—for "jumping" does not count either way, the only "killing" being when two "horses" come in the same notch—his rear is in danger, and he will try to run on out of the way of his pursuer as fast as possible. The more players the more complicated the game, for each "horse" is threatened alike by foes that chase from behind and charge from before, and the most skillful player is liable to be sent back to the starting point several times before the game is finished, which is as soon as one "horse" has made the complete circuit. Sometimes the players, when very young or unskilled, agree there shall be no "killing;" but unless there is an explicit arrangement to that effect, "killing" is understood, and it adds greatly to the interest of the game.

There is also another variation of the game, a rare one, however. In case the players agree to throw fifteens, all the *pa-tol* sticks are made the same, except that one has an extra notch to distinguish it from the others. Then the throws are as shown in fig. 90.

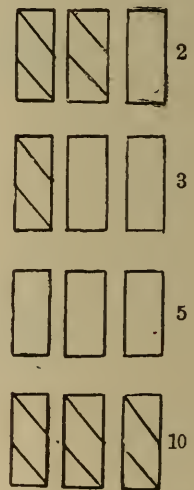


Fig. 90.

COUNTS IN PA-TOL.

From Lummis.

In reply to a letter of inquiry, Mr. Lummis writes me that he distinctly remembers having witnessed this game at Isleta, Santa Clara, San Ildefonso, Tesuque, and Taos (Tewan); at Acoma, Ti tsí-a-má, and Cañada Cruz (Acoma colonies), Cochitá, Laguna, El Rito, Sandia, and San Felipe (Keresan), and Zuñi.

I feel quite confident I saw it also in San Juan (Tewan), though of that I would not be positive. I can not remember seeing the game played in Jemez, Picuris, and Pojoaque (Tewan); in Sia (Keresan) or any of the Moqui Pueblos except Tehua (which of course is a village of migration from the Rio Grande). In Nambé (Tewan) I never saw it, I am sure.

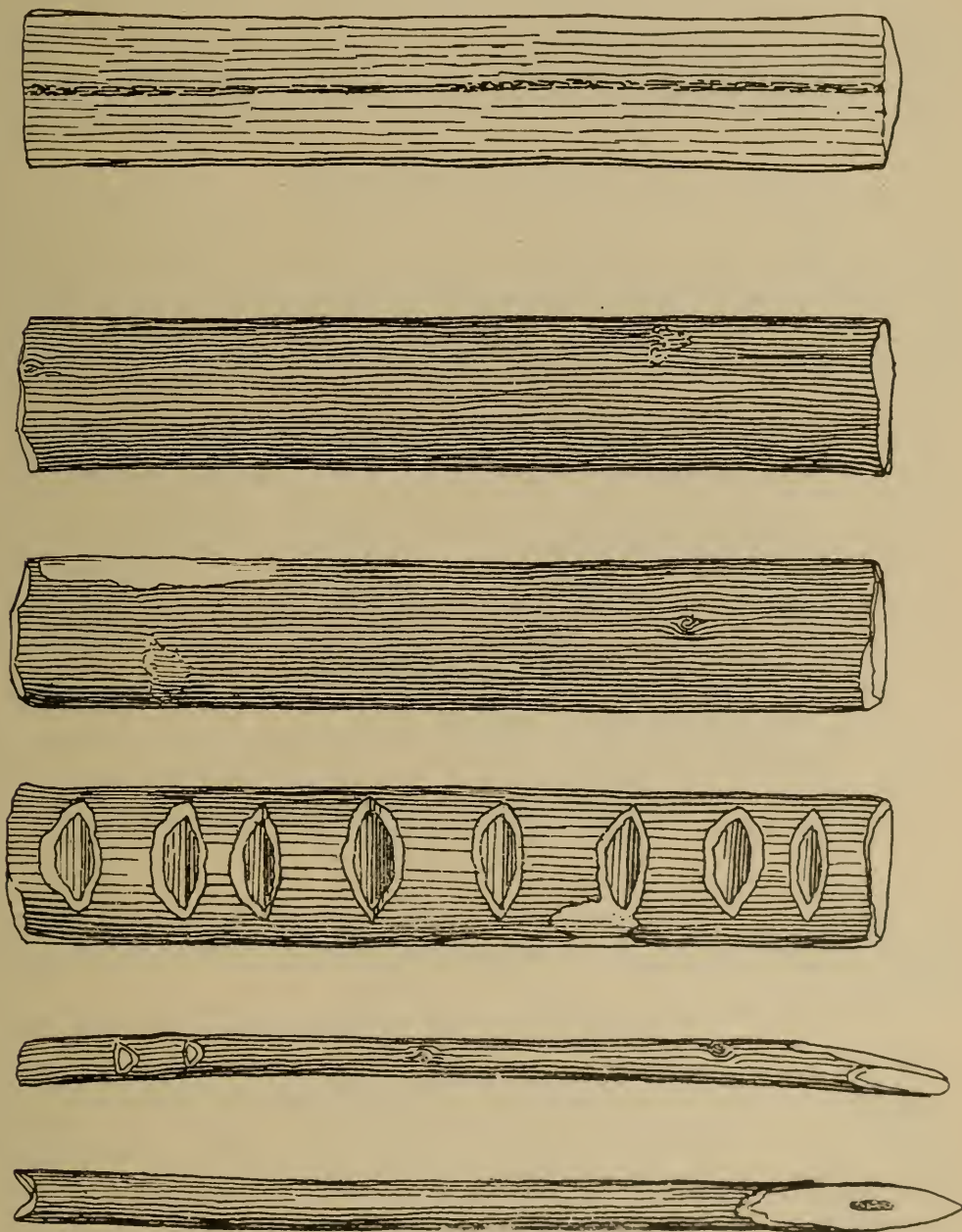


Fig. 91.

STAVES AND MARKING STICKS USED IN THE GAME OF CA-SE-HE-A-PA-NA.

Lengths, $4\frac{1}{4}$ and $4\frac{3}{4}$ inches.

Tewa Indians, Taos, New Mexico.

Cat. No. 20123, Museum of Archaeology, University of Pennsylvania.

TEWA. Taos, New Mexico. (Cat. No. 20123, Mus. Arch., Univ. Penn.)

Set of three sticks, $4\frac{1}{4}$ inches in length, $\frac{3}{4}$ inch broad, and $\frac{5}{16}$ inch thick (fig. 91.) One side round with bark and the other flat. One of the sticks has eight transverse cuts on the bark side, as shown in the figure, with

the opposite flat side smeared with red paint. Also two twigs, $4\frac{3}{4}$ inches in length, with sharpened ends, one having two nicks cut near one end

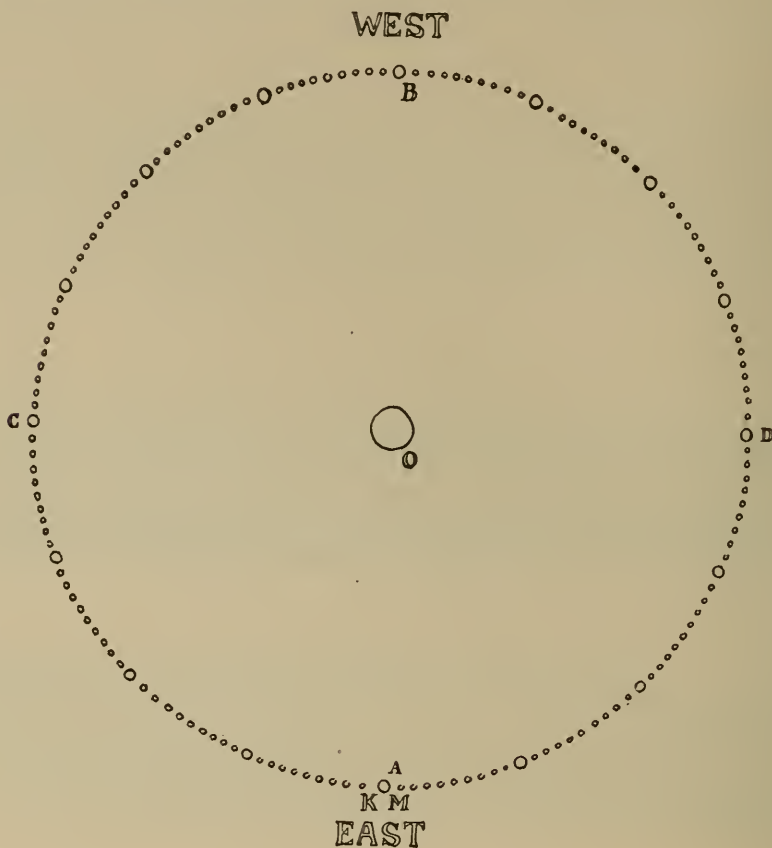


Fig. 92.

CIRCUIT FOR GAME OF CA-SE-HE-A-PA-NA.

Tewa Indians, Taos, New Mexico.

From a sketch by Dr. T. P. Martin.

to distinguish it. Employed in the game of *Ca-se-he-a-pa-na* (Spanish, *Pastore*), of which the collector, Dr. T. P. Martin, of Taos, has furnished the following account:

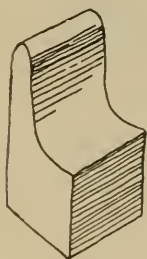


Fig. 93.

WOODEN DIE.

Kwakiutl Indians,
British Columbia.

Field Columbian Museum,
Chicago. (After Boas.)

A circle, from 2 to 3 feet in diameter (fig. 92), is marked on the ground with small stones. One hundred and sixty stones are used, with larger ones at each quarter, dividing the circle into four quarters of forty stones each. A line AB is marked out as a "river," and is usually marked from east to west. The line CD is designated as a "trail." A large stone is placed in the center.

There are two players, each of whom takes one of the little twigs, which are known as "horses." A player takes the three stones, holds them together, and drops them vertically upon the large stone. He counts according to their fall, and moves his horse as many places around the circuit. They throw and move in turn, going in opposite directions, one starting from K and the other from M. If M passes point B before K reaches it, and meets K's horse anywhere around the circle, K's horse is said to be "killed," and has to go back to A and start over again, and *vice versa*. A chief point in the game is to reach B before the other player, so as to kill him on the second half of the circle.

The counts are as follows:

2 flat and notched stick notches up	= 15
3 round sides up	= 10
3 flat sides up	= 5
2 flat and 1 round side not notched up	= 1
1 flat and 2 round sides not notched up	= 1

This game is usually played all night on the night of November 3d of each year. November 3d is known as "The Day of the Dead," and this game seems in some way to be connected with it, or rather with its celebration, but I can not find out any tradition connecting the two.

WAKASHAN STOCK.

KWAKIUTL. British Columbia.

Dr. Franz Boas¹ describes these Indians as using wooden dice (fig. 93) in a game called *Eibayu*. "The casts count according to the narrowness of the sides." The dice collected by him are in the Field Columbian Museum.

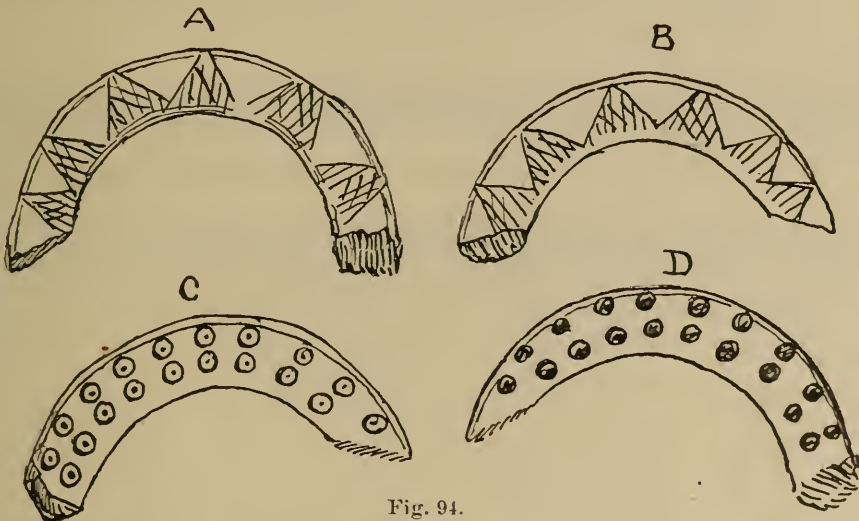


Fig. 94.

BEAVER TEETH DICE.

Length, 2 to 2½ inches.

Makah Indians, Neah Bay, Washington.

Cat. No. 23351, U.S.N.M.

MAKAH. Neah Bay, Washington. (Cat. No. 23351, U.S.N.M.)

Seven beaver teeth, probably part of two or more sets. Two—right and left—apparently from the same animal are similarly marked on the flat side with chevron pattern (fig. 94 AB). Two, also apparently from the same animal, marked with circles and dots (fig. 94 CD). Two teeth—right and left—are marked with three chevrons, and one odd tooth has ten circles. Collected by Mr. J. G. Swan.

The following account of the game is given by the collector:

Four teeth are used; one side of each has marks and the other is plain. If all four marked sides come up, or all four plain sides, the throws form a double; if two marked and two plain ones come up, it is a single; uneven numbers lose.²

¹Sixth Report on the Indians of British Columbia, p. 10.

²The Indians of Cape Flattery, Smithsonian Contributions to Knowledge, 220, p. 44.

He also states this game is usually played by the women, and that the beaver teeth are shaken in the hand and thrown down.¹

YUMAN STOCK.

COCOPA. (Cat. No. 76165, U.S.N.M.)

Set of four sticks of willow² wood, 8 inches long, about $1\frac{1}{8}$ inches broad, and $\frac{1}{2}$ inch thick (fig. 95). Flat on one side, which is uniformly marked lengthwise in the center with a band of red paint about $\frac{1}{2}$ inch in width. Opposite, rounded and unpainted. Collected by Mr. Edward Palmer.

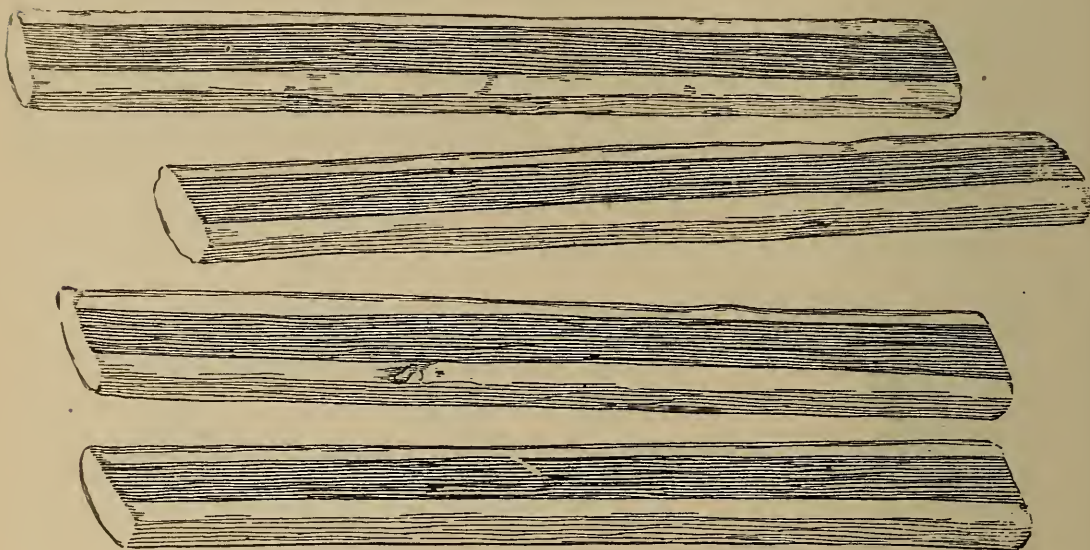


Fig. 95.

SET OF STAVES FOR GAME.

Length, 8 inches.

Cocopa Indians.

Cat. No. 76165, U.S.N.M.

HAVASUPAI. Arizona.

Mr. G. Wharton James has furnished the writer with the following account:

Squatted around a circle of small stones, the circle having an opening at a certain portion of its circumference called the *yam-se-kyalb-ye-ka*, and a large flat stone in the centre called *taā-be-che-ka*, the Havasupai play the game called *Hue-ta-quee-che-ka*. Any number of players can engage in the game.

The players are chosen into sides. The first player begins the game by holding in his hand three pieces of short stick, white on one side and red on the other. These sticks are called *toh-be-ya*, and take the place of our dice. They are flung rapidly upon the central stone, *taā-be-che-ka*, and as they fall counts are made as follows:

3 whites up	= 10
2 whites, 1 red up	= 2
2 reds, 1 white up	= 3
3 reds	= 5

¹ The Northwest Coast, or Three Years' Residence in Washington Territory, New York, 1857, p. 158.

² *Salix amygdaloides*.



Fig. 96.

SET OF BLOCKS FOR GAME.

Length, $6\frac{1}{2}$ inches.

Mohave Indians, Arizona.

Cat. No. 16334, U.S.N.M.

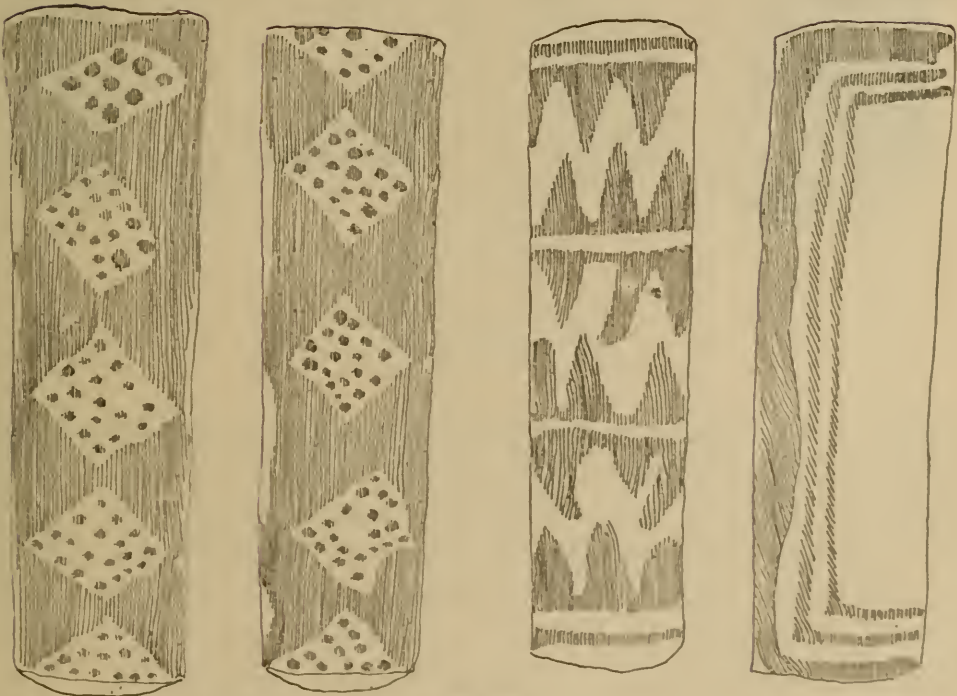


Fig. 97.

SET OF BLOCKS FOR GAME.

Length, 6 inches.

Mohave Indians, southern California.

Cat. No. 24166, U.S.N.M.

Tallies are kept by placing short sticks between the stones, *huc*, that compose the circle, one side counting in one direction from the opening and the other keeping tally in the opposite direction.

MOHAVE. Arizona. (Cat. No. 10334, U.S.N.M.)

Set of four blocks of willow¹ wood, $6\frac{1}{8}$ inches in length, 2 inches in width, and $\frac{1}{2}$ inch in thickness. Section ellipsoidal. One side painted red with designs as shown in fig. 96, and opposite, unpainted. Described as used by women. Collected by Mr. Edward Palmer.

MOHAVE. Southern California. (Cat. No. 24166, U.S.N.M.)

Set of four blocks of willow¹ wood, 6 inches in length, $1\frac{1}{2}$ inches in width, and $\frac{5}{8}$ inch in thickness. One side flat and painted brown with

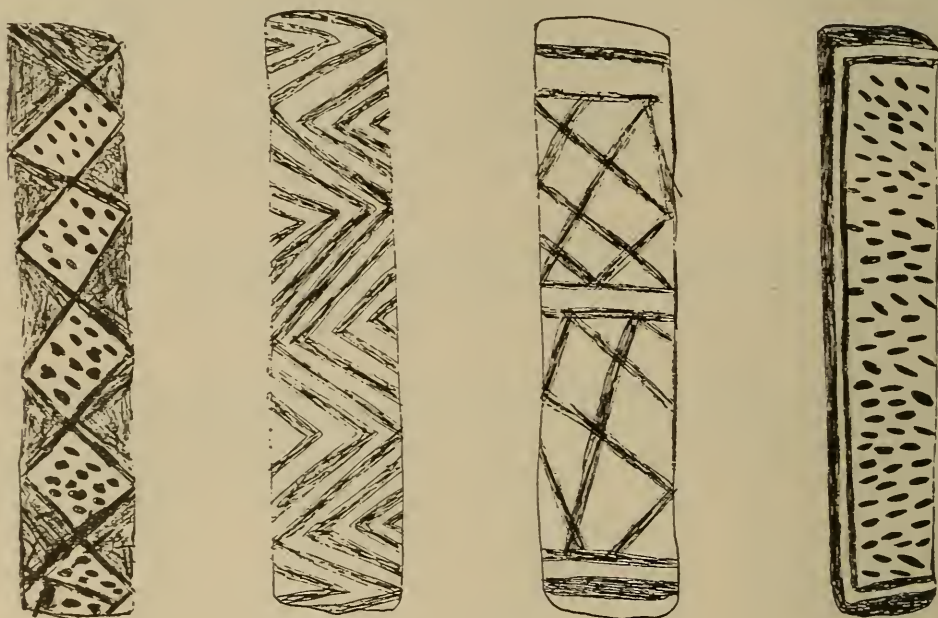


Fig. 98.

GAMING STICKS.

Length, $5\frac{3}{8}$ inches.

Mohave Indians, Arizona.

Cat. No. 10090, Peabody Museum of American Archaeology.

designs (fig. 97) similar to those on the preceding; opposite, rounded and unpainted. Collected by Mr. Edward Palmer.

MOHAVE. Arizona? (Cat. No. 10090, Peabody Museum.)

Set of four gambling sticks, $5\frac{3}{8}$ inches in length and $1\frac{1}{4}$ inches in width. Marked on one face with designs as shown in fig. 98; opposite sides plain. Collected by Mr. Edward Palmer.

MOHAVE. Arizona? (Cat. No. 10090, Peabody Museum.)

Set of four gambling sticks, $3\frac{1}{2}$ to $3\frac{3}{4}$ inches in length and $\frac{1\frac{1}{8}}{16}$ inch in width. Marked on one face with red and black designs; opposite plain. Collected by Mr. Edward Palmer.

¹ *Salix amygdaloides*.

ZUÑIAN STOCK.

ZUÑI. New Mexico. (Cat. No. 69285, U.S.N.M.)

Set of three sticks of larch wood, $3\frac{3}{4}$ inches in length, 1 inch in breadth, and $3\frac{1}{8}$ inches in thickness (fig. 99). Section rectangular. One side painted red, opposite unpainted.

ZUÑI. New Mexico. (Cat. No. 69004, U.S.N.M.)

Set of three sticks of piñon wood (one missing), $3\frac{3}{4}$ inches in length, $1\frac{1}{8}$ inches in breadth, and $\frac{3}{16}$ inch in thickness. One side flat and blackened; opposite roughly rounded and unpainted. Ends cut straight across and painted black.

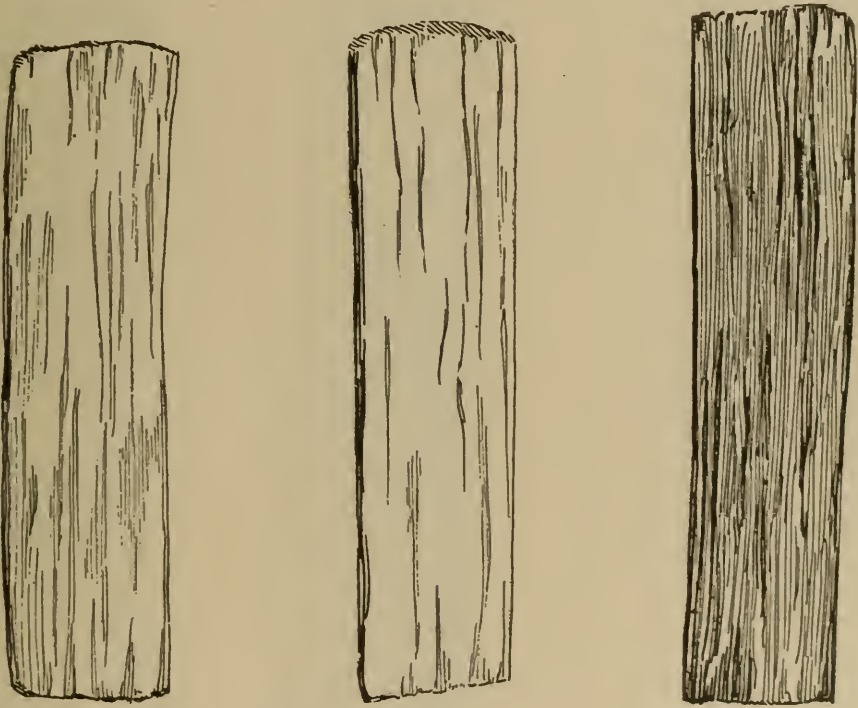


Fig. 99.

SET OF BLOCKS FOR GAME OF TA'-SHO'-LI-WE.

Length, $3\frac{3}{4}$ inches.

Zuñi Indians, New Mexico.

Cat. No. 69285, U.S.N.M.

ZUÑI. New Mexico. (Cat. No. 69355, U.S.N.M.)

Set of three sticks rudely shaped from piñon wood, $5\frac{1}{2}$ inches in length, $\frac{3}{4}$ inch in breadth, and about $\frac{1}{4}$ inch in thickness. Section rectangular, with both sides flat; one painted black, opposite plain.

ZUÑI. New Mexico. (Cat. No. 69352, U.S.N.M.)

Set of three sticks of piñon wood, $5\frac{1}{2}$ inches in length, $1\frac{1}{4}$ inches in breadth, and about $\frac{1}{4}$ inch in thickness. One side flat and painted black; opposite rounded and painted red.

ZUÑI. New Mexico. (Cat. No. 69284, U.S.N.M.)

Set of three sticks of piñon wood, $5\frac{1}{2}$ inches in length, $\frac{7}{8}$ inch in breadth, and about $\frac{3}{16}$ inch in thickness. Slightly rounded on both sides, one being painted black and the other red.

ZUÑI. New Mexico. (Cat. No. 69354, U.S.N.M.)

Set of three sticks of piñon wood, $5\frac{1}{2}$ inches in length, about $1\frac{3}{4}$ inches in breadth, and $\frac{3}{16}$ inch in thickness. Painted black on one side; opposite unpainted. Corresponding ends on one side cut straight across, and opposite with one corner rounded.

ZUÑI. New Mexico. (Cat. No. 69340, U.S.N.M.)

Set of three sticks of pine wood, 6 inches in length, $1\frac{5}{16}$ inches in breadth, and $\frac{7}{16}$ inch in thickness. Section rectangular. One side marked with triangles of red and black paint; opposite unpainted.

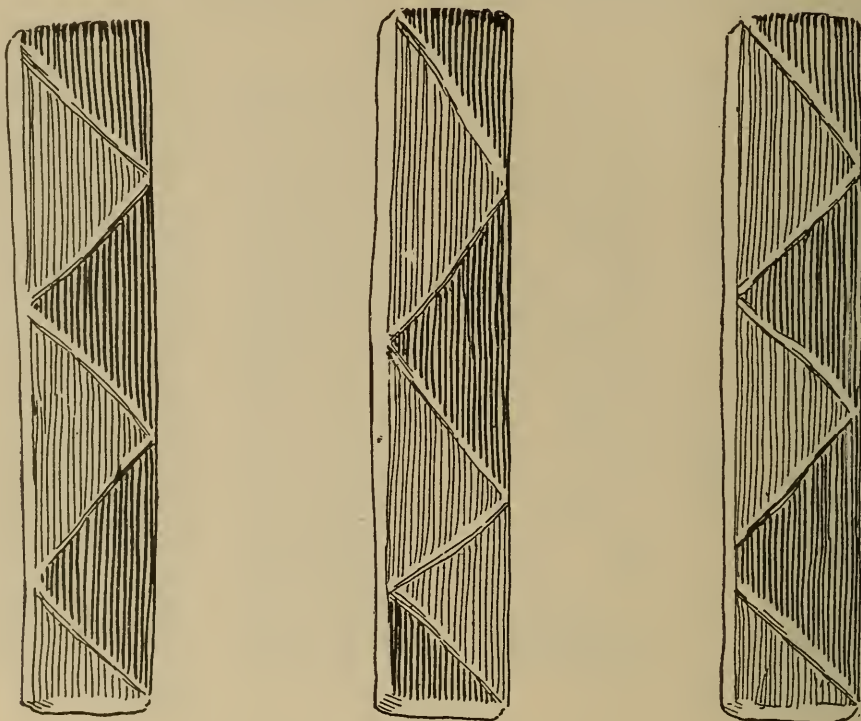


Fig. 100.

SET OF BLOCKS FOR GAME OF TA'-SHO'-LI-WE.

Length, 4 inches.

Zuñi Indians, New Mexico.

Cat. No. 69287, U.S.N.M.

ZUÑI. New Mexico. (Cat. No. 69287, U.S.N.M.)

Set of three sticks of white pine, 4 inches in length, $\frac{3}{4}$ inch in breadth, and $\frac{3}{16}$ inch in thickness (fig. 100). One face flat with triangles painted red and black and outlined by incised lines. Opposite rounded and unpainted.

ZUÑI. New Mexico. (Cat. No. 69281, U.S.N.M.)

Set of three sticks of yellow pine, $5\frac{1}{2}$ inches in length, 1 inch in breadth, and $\frac{3}{8}$ inch in thickness (fig. 101). One face flat and unpainted; opposite rounded and painted red and black in triangular designs, the triangles on one side being red with a black inner triangle and *vice versa*. The outline of the larger triangles is deeply incised.

ZUÑI. New Mexico. (Cat. No. 69003, U.S.N.M.)

Set of three sticks of basswood¹ $4\frac{5}{8}$ inches in length, $1\frac{5}{8}$ inch in breadth, and $\frac{5}{16}$ inch in thickness (fig. 102). Flat and painted light red on one side; opposite rounded and painted in triangular designs in red and black, the pattern being double that on the preceding: Cat. Nos. 69340, 69287, and 69281.

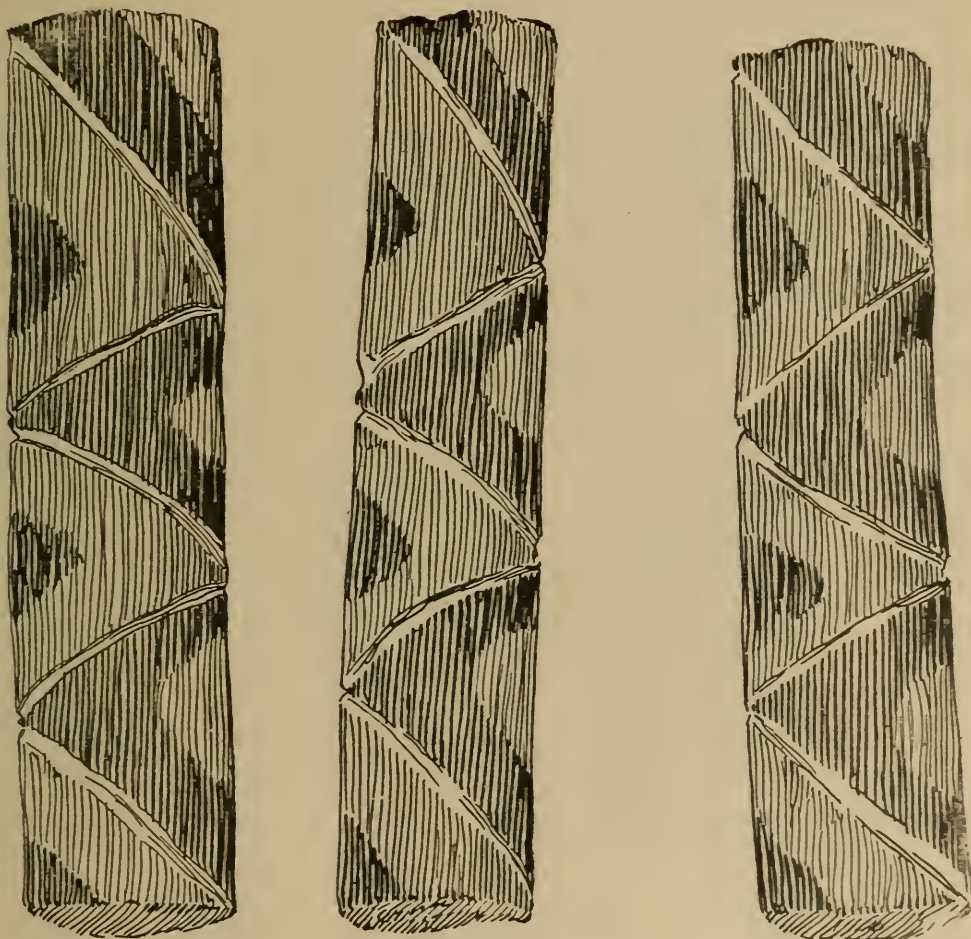


Fig. 101.

SET OF BLOCKS FOR GAME OF TA'-SHO'-LI-WE.

Length, $5\frac{1}{2}$ inches.

Zuñi, New Mexico.

Cat. No. 69281, U.S.N.M.

The preceding Zuñian staves were collected by Col. James Stevenson. They were all used, as I am informed, by Mr. Cushing, for the game of *Ta'-sho'-li-we*, or "wooden canes" (one of the seven sacred games of Zuñi), which he described to me as follows:

*Ta'-sho'-li-we*² is played according to the throws of three wooden blocks, painted red on one side and black upon the other, around a circle of stones placed upon the sand. Two or four players engage, using two or four splints as markers, and advancing, according to their throws around the circle, which is divided into forty parts by

¹ Deal boards, imported into Zuñi.

² *Ta'-sho'-li-we* was described by John G. Owens ("Some Games of the Zuñi" in the *Popular Science Monthly* for May, 1891. He gives the name of the central stone as

pebbles or fragments of pottery, and has four openings called "doorways" at its four quarters. At the commencement of the game four colored splints are arranged at these points: at the top (North) a yellow splint; at the left (West) a blue; at the bottom (South) a red, and at the right (East) a white splint. The blocks are tossed ends down on a disk of sandstone placed in the middle of the circle, and the counts are as follows:

3 red sides up = 10

3 black sides up = 5

2 red and one black = 3

2 black and one red = 2

A count of ten gives another throw. When four play, the straws of the North and West move around from right to left, and those of the South and East from left to right. When a player's move terminates at a division of the circle occupied by an

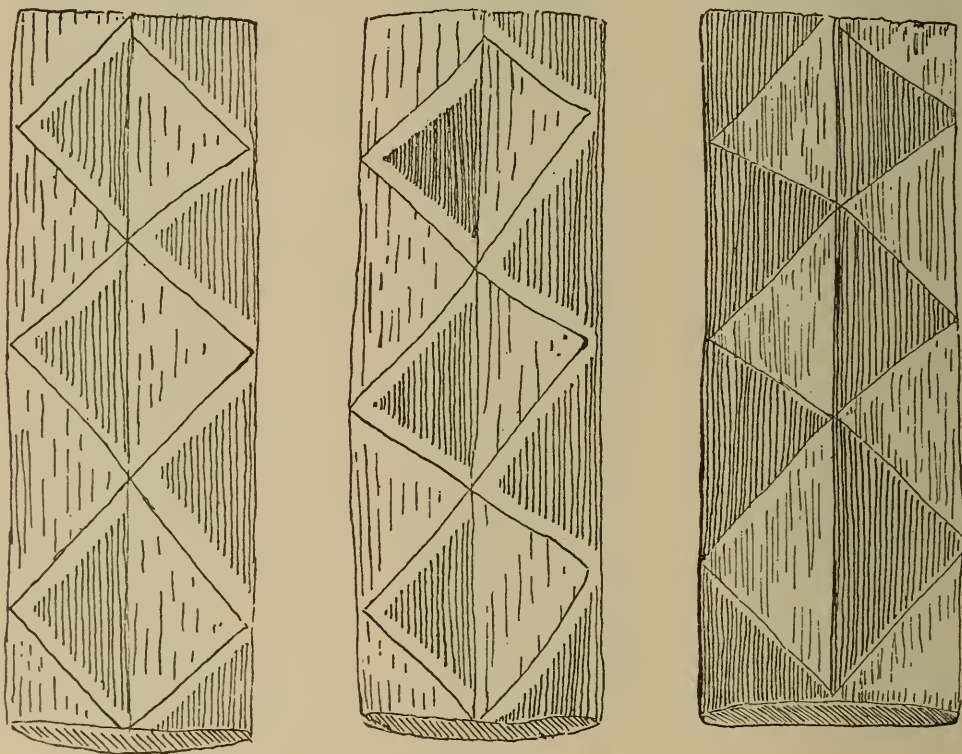


Fig. 102.

SET OF BLOCKS FOR GAME OF TA'-SHO'-LI-WE.

Length, $4\frac{5}{8}$ inches.

Zuñi, New Mexico.

Cat. No. 69003, U.S.N.M.

adversary's straw, he takes it up and sends it back to the beginning. It is customary to make the circuit of the stones four times, beans or corn of different colors being used to count the number of times a player has gone around. The colors on the wooden blocks or dice symbolize the two conditions of men:

Red, light or wakefulness;

Black, darkness or sleep.

The splints have the following symbolism:

At top, yellow, north, air, Winter;

a-rey-ley and the dice *ta-mey*. For counting, each player has a horse or *touche*. "The horse is supposed to drink at the intervals between the groups of stones. One game which I witnessed had loaded rifle cartridges for stakes. Each player placed his bet within the circle."

At left, blue, west, water, Spring;

At bottom, red, south, fire, Summer;

At right, white, east, earth, Autumn.

The following is a vocabulary of the game:

Blocks: *Ta'-sho'-li'-we*; literally, "Of wood canes."

Splints: *Ti'-we*.

Circle of stones: *I te tchi na kya a we*; literally, "From one to another succeeding."

Doorway: *A wena a te kwi a*; literally, "Doorway, all directions of."

Beans used as counters: *A-wi yah na-kya no-we*; literally, "For keeping count beans."

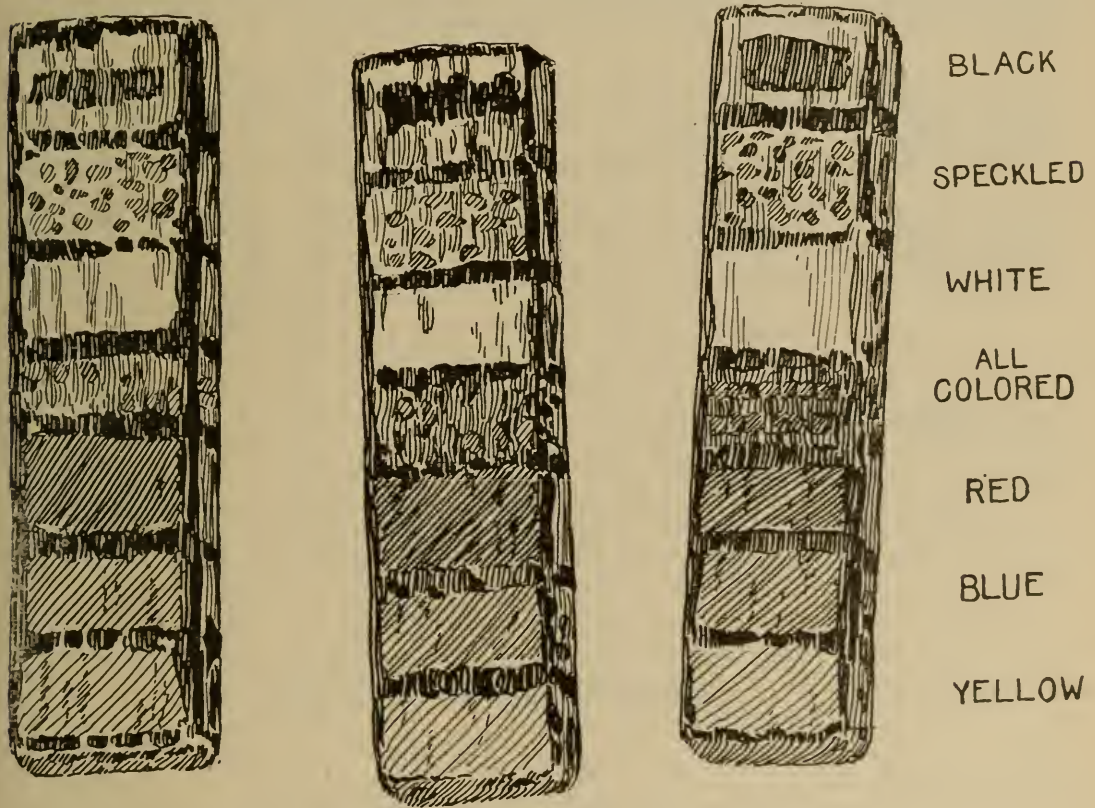


Fig. 103.

SET OF BLOCKS FOR GAME OF TEM-THLĀ-NAH-TA'-SHO'-LI'-WE.

Length, 4 inches.

Zuñi Indians, New Mexico.

Cat. No. 16531, Museum of Archaeology, University of Pennsylvania.

From the name of this game, *ta'-sho'-li'-we*, or "wood-canes" (wood-cane game), its origin may be referred to the Zuñian game of *Sho'-li'-we* or "canes," the actual canes of which are replaced with wood in *Ta'-sho'-li'-we*.

Mr. Cushing informs me that a basket game, similar to that described as existing among the Arapaho, Cheyenne, Sioux, etc., is also played in Zuñi under the name of *Thatl pa-tsi-we*, or "Tablet bounce-basket game."

ZUÑI. New Mexico. (Cat. No. 16531, Mus. Arch., Univ. Penn.)

Reproductions¹ of set of three blocks, originals of piñon wood, 4 inches in length, $1\frac{1}{8}$ inches in breadth, and $\frac{5}{16}$ inch in thickness (fig. 103).

¹ Made by Mr. Cushing.

Rectangular in section. One side uniformly painted white and opposite with transverse bands of color separated by black lines of paint, in the following order: Yellow, blue, red, variegated, white, speckled, and black.¹

Mr. Cushing informs me that these blocks are used in a divinitory form of *Ta'-sho'-li-we*, called *Tem-thlā-nah-na-ta'-sho'-li-we*, "of all the regions wood-canes."

This game is employed in name divination and prognostication of an individual, usually of a youth, the colors being noted for the purpose of determining the rank and name significant thereof of the one for whom the divination is made.

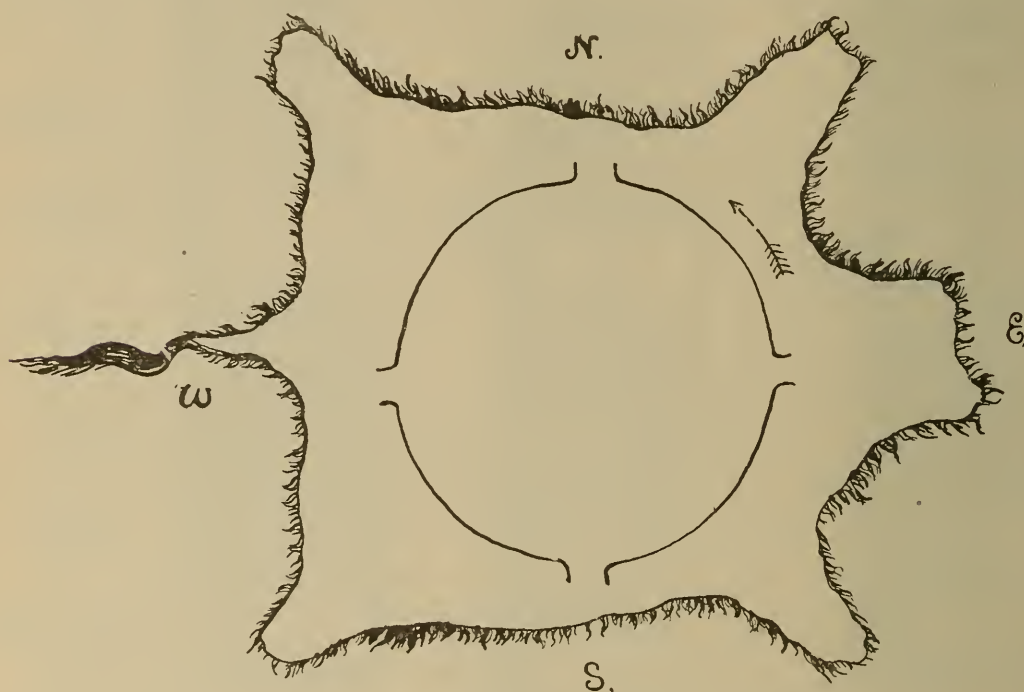


Fig. 104.

HIDE USED AS GAMING BOARD IN TEM-THLĀ-NAH-TA'-SHO'-LI-WE.

Zuñi Indians, New Mexico.

Sketch by Mr. Frank Hamilton Cushing.

In this game the counting grains are named for:

North: *Thlup tsi kwa kwe*, "Yellow medicine seed people."

West: *Thlí a kwa kwe*, "Blue medicine seed people."

South: *Shi lo a kwa kwe*, "Red medicine seed people."

East: *Kó ha kwa kwe*, "White medicine seed people."

Upper region: *Ku tsu a kwa kwe*, "Variegated medicine seed people."

Lower region: *Kwí na kwa kwe*, "Black medicine seed people."

Middle or all-containing region: *Í to pa nah na kwa kwe*, "Of all colors medicine seed people."

¹ For the significance of these colors in Zuñi see note, p. 679. The stick with notches (fig. 88), used in the Tewan game, suggests the probability that these painted sticks replaced others wrapped with colored thread or fabric. Compare with the ancient Chinese scepter (fig. 126) banded with five colors by being wrapped with colored cords.

ZUÑI. New Mexico. (Cat. No. 20031, Mus. Arch., Univ. Penn.)

Set of four sticks, $5\frac{1}{2}$ inches in length, in two pairs, each of which consists of a length of reed split in the middle. The inner sides of the

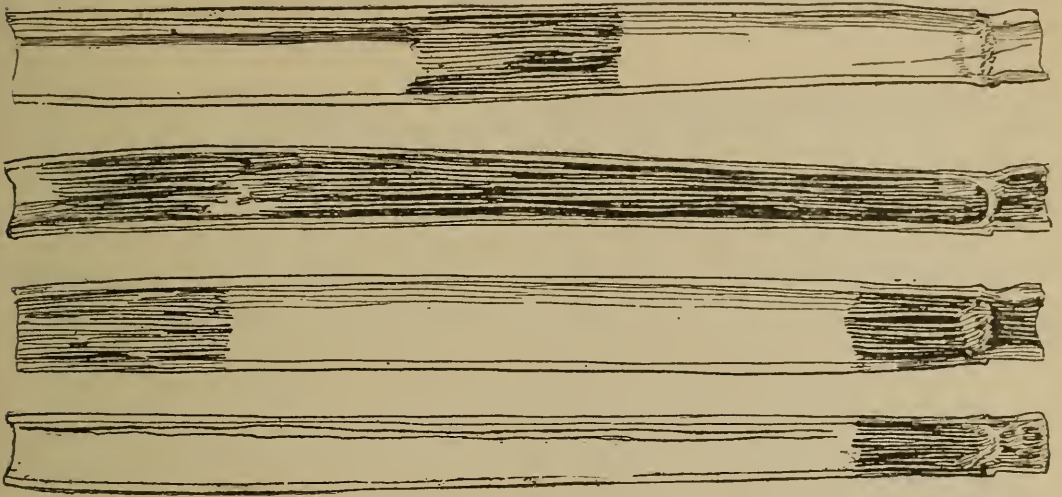


Fig. 105.

SET OF SACRIFICIAL CANES FOR SHO'-LI-WE.

(Reverse.)

Cat. No. 20031, Museum of Archaeology, University of Pennsylvania.

reed are painted as shown in fig. 105, and the opposite rounded sides scratched with transverse lines and burned, as shown in fig. 106.

These were employed, according to Mr. Cushing, in the game of

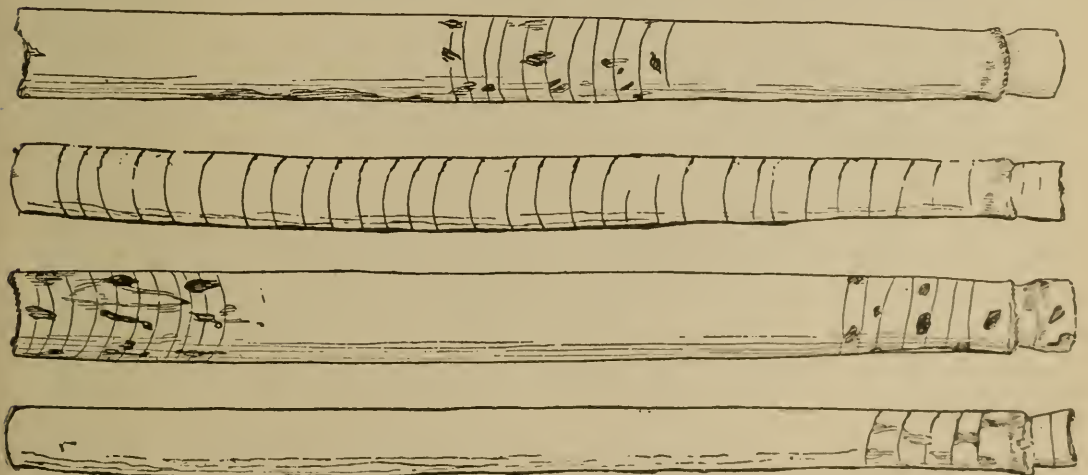


Fig. 106.

SET OF SACRIFICIAL CANES FOR SHO'-LI-WE.

(Obverse.)

Length, $5\frac{3}{4}$ inches.

Zuñi Indians, New Mexico.

Cat. No. 20031, Museum of Archaeology, University of Pennsylvania.

Sho'-li-we, or "canes," one of the four games¹ which are sacrificed to

¹ In addition to *Sho'-li-we* there were *Hápochiwe*, shuttlecock; *Iyankolotomawe*, hidden ball, and *Mótiqwawe*, kicked stick. All were used in divination. Compare with the four Sia games described on p. 730.

the twin war gods Áhaiyuta and Mátsailema. These particular canes were not made to play with, but for the purpose of sacrifice.

ZUÑI. New Mexico. (Cat. No. 69289, U.S.N.M.)

Two sets, each of four sticks, one of $7\frac{3}{4}$ inches and the other 7 inches

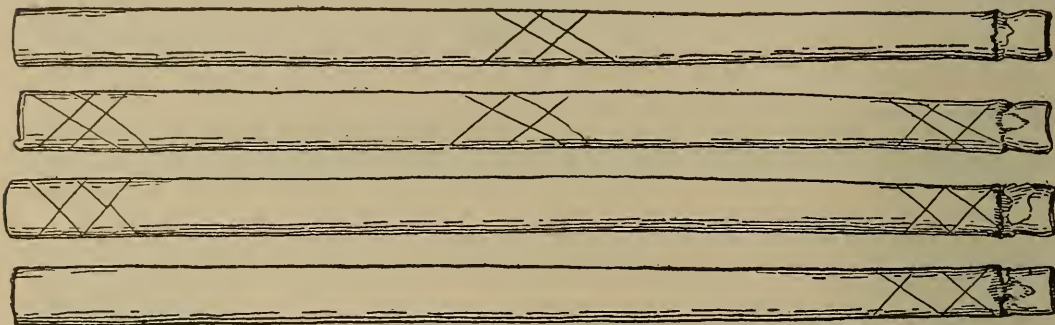


Fig. 107.

SET OF SACRIFICIAL CANES FOR SHO'-LI-WE.

(Obverse.)

Zuñi Indians, New Mexico.

Cat. No. 69289, U.S.N.M.

in length. Made in pairs, like the preceding, of split reed. The inner sides of the reed are painted like the preceding. The outer sides of the longer set are unmarked, while those of the shorter set are marked, as shown in fig. 107.

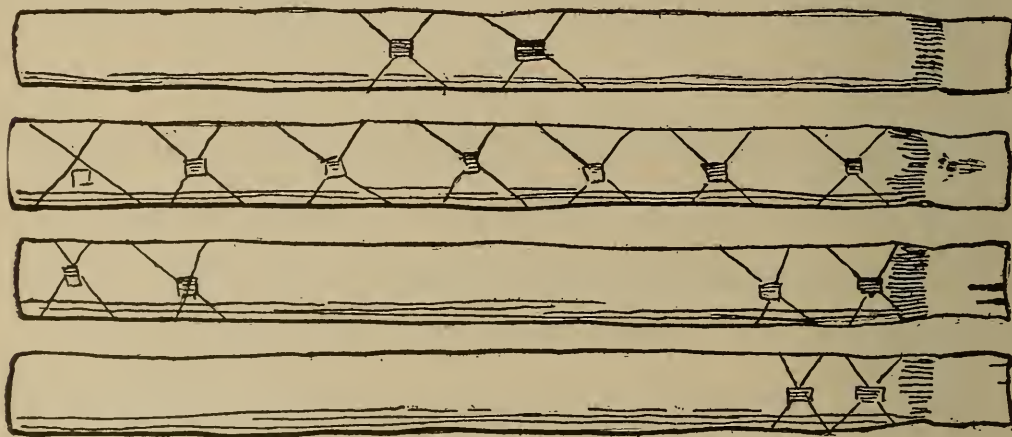


Fig. 108.

SET OF CANES FOR GAME OF SHO'-LI-WE.

(Obverse.)

Length, $6\frac{1}{2}$ inches.

Zuñi Indians, New Mexico.

Cat. No. 69277, U.S.N.M.

Mr. Cushing informs me that these two sets were used together, also for sacrificial purposes, the longer one being offered to Áhaiyuta and the shorter to Mátsailema.¹

¹ Mátsailema is somewhat shorter in statue than his twin brother, and all of his things are made somewhat shorter. He always wears a shorter war club and shorter bow. (Cushing.)



SHRINE OF THE WAR GODS.
Twin Mountain, Pueblo of Zuni.

ZUÑI. New Mexico. (Cat. No. 69277, U.S.N.M.)

Set of four sticks, $6\frac{1}{2}$ inches in length and $\frac{1}{2}$ inch in width, made of split cane. The inner sides painted like the preceding, and the rounded sides scratched with cross marks, as shown in fig. 108. Collected by Col. James Stevenson.

ZUÑI. New Mexico. (Cat. No. 69278, U.S.N.M.)

Set of four sticks, 6 inches in length and $\frac{1}{2}$ in inch width, made of split cane. The inner sides painted like the preceding, and the rounded sides marked with cuts, as shown in fig. 109. This set, with the one preceding, was intended for actual use, and is made of heavy cane, with

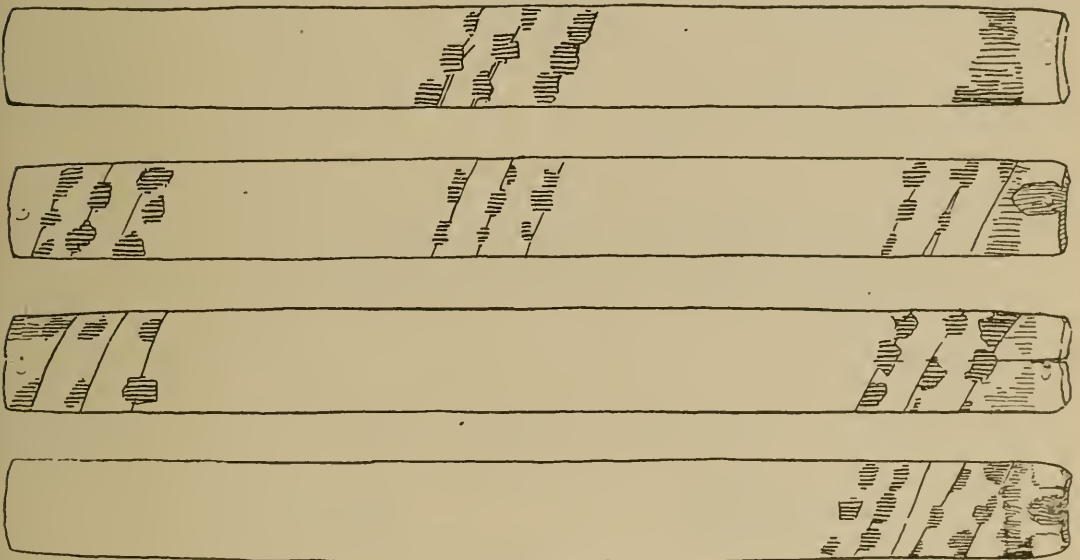


Fig. 109.

SET OF CANES FOR SHO'-LI-WE.

(Obverse.)

Length, 6 inches.

Zuñi Indians, New Mexico.

Cat. No. 69278, U.S.N.M.

the inside charred at the edges, and unlike the sacrificial sets, which consist of common marsh reed. Mr. Cushing has kindly placed in my hands the following hitherto unpublished account of *Sho'-li-we*:¹

The game of *Sho'-li-we* is certainly the most distinctive of any practiced by the Zuñi Indians. It is not confined to them, but forms of it are found among all the

¹ Mr. Owens described *Sho'-li-we* in the paper referred to in a preceding note (p. 773). The names of the four sticks he gives as follows: The one whose concave side is entirely black, *quin*, the Zuñi for black; the one with one black end, *path-tō*; with two black ends, *kō-ha-kwa*; and the one with a black center, *ath-lu-a*. He figures two of the reeds, and the manner of holding the sticks, which he describes as thrown with the right hand against a suspended blanket and allowed to fall on another blanket. "Two of the pieces belong to each man and are companions. There is a pool with twelve markers, and he who wins the markers wins the game. The winner takes the twelve markers up into his hands and breathes on them. This is because they have been good to him and allowed him to win. It is wholly a game of chance, and horses, guns, saddles, and everything are staked upon the throw.

more settled of the present Indians in both our own southwest, and in northern, western, and central Mexico; while variants of it and derived games may be traced over well-nigh the whole western half of our continent.

A study of the distinctive marks of the different sticks or cane slips used in this game by the Zuñi would seem to indicate that this peculiar form of it is the most primitive. The reason for this will subsequently appear.

The name *sho'-li-we* is derived from *shó o li*, "arrow," and *we*, plural ending, signifying "parts of," *shó we* being the plural of simple arrows. *Shó o li*, or "arrow," is derived in turn from *shó o le*, "cane," the termination *li* in the derived word being a contraction of *li a*, and signifying "out of," "from," or "made of." Thus, the name of the game may be translated "cane arrows," or "cane arrow pieces" or "parts."

These "parts" consist of four slips of cane. From the fact that these slips are so split and cut from the canes as to include at their lower ends portions of the joints or septæ of the canes, and from the further fact that they are variously banded with black or red paint, or otherwise, it may be seen that they represent the footings or shaftments of cane arrows in which the septæ at the lower ends serve as stops for the footing or nocking-plugs.¹

A study of the bandings by which these cane slips are distinguished from one another reveals the very significant fact that they are representative of the rib-bandings of cane-arrow shaftments.

I have found that sets of Zuñi, as well as the ancestral Cliff Dweller arrows, were thus ribbanded with black or red paint to symbolize, in the arrows so marked, the numerical and successional values of the Four Quarters, each set, especially of war arrows, consisting of four subsets, the shaftments of each differently marked. The reasons for this, and processes of divination by which the members of the different sets among the arrows were determined during their manufacture, I have set forth in a paper on "The Arrow," published in the Proceedings of the American Association for the Advancement of Science, 1895, and also in the American Anthropologist for October of the same year.

In the second part of that paper, the publication of which was delayed by my Florida explorations, I proceeded to show how these various facts indicated quite clearly that the Zuñi game of *Sho'-li-we* was, as its name implied, developed from the use of actual arrows for divination; and I further instanced many ceremonial usages of simple or ceremonial arrows in such divinatory processes as further demonstrating this claim.

It may be well for me to preface a description of the four cane slips constituting the principal apparatus of the game by a statement or two relative to the successional numbers of the Four Quarters as conceived in Zuñi dramaturgy.

The Chief or "Master" region, as well as the *first*, is the North, designated the Yellow; believed to be the source of breath, wind, or the element Air, and the place of Winter; hence of violence or war, and therefore Masculine.

The next or *second* region is the West, designated the Blue; believed to be the source of moisture or the element Water and the place of Spring, or renewal and fertility; hence of birth, and therefore Feminine.

The next, or third, is the South, designated as the Red; believed to be the source

¹ The canes are split with reference to the notion that one side is masculine or north, and the other feminine or south. This is determined by the direction or character of the natural growth, as well as by the presence or absence of the leaf pocket in the joint on the one side or the other of that particular section which forms the shaftment of the arrow (Cushing). In ancient China, according to the Chow Le (LXII, 37), the arrow maker floated the arrow longitudinally upon water to determine the side which corresponded to the principle of inertia and the side which corresponded with the principle of activity. The former sank, while the latter rose. He cut the notch with reference thereto.

of heat or the element Fire, and the place of Summer, of growth and productivity; hence of fostering, and likewise Feminine.

The last, or *fourth* of the *earthly* regions represented in the ordinary sheaf of arrows and in the game, is the East, designated the White, and believed to be the source of seeds and the element Earth, and the place of Autumn, of new years, and hence of creation; therefore Masculine again.¹

These various regions and their numbers and meanings are symbolized on the arrows of the Four Quarters by differences in their ribbandings (fig. 110).

Those of the North were characterized by a single medial ribbanding around the shaftment, sometimes of yellow, but more usually of black, the color of death.

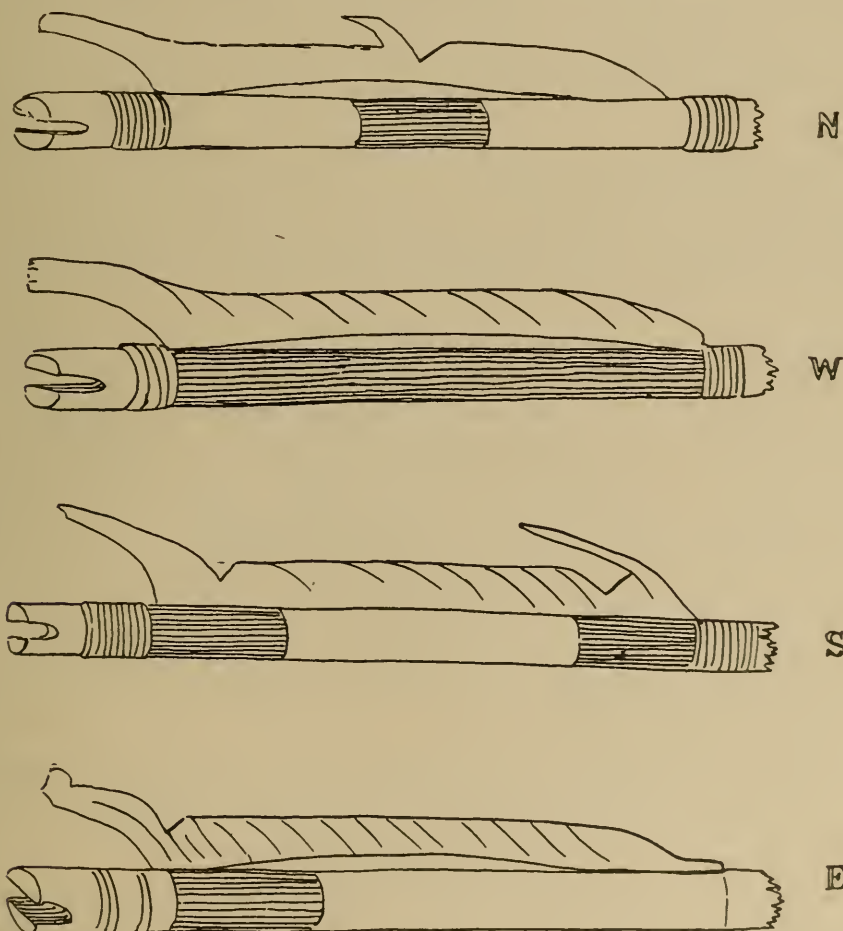


Fig. 110.

ARROW SHAFTMENTS OF THE FOUR DIRECTIONS, SHOWING RIBBANDING AND CUT COCK FEATHERS.

Zuñi.

From a sketch by Frank Hamilton Cushing.

Those of the West were also singly ribbanded coextensively with the shaftment, but there was oftentimes a narrow terminal band at either end of this broad band, sometimes of blue or green, but usually of black.

Those of the South were characterized by two bands midway between the two ends and the middle, sometimes of red, but usually of black.

Those of the East were characterized by either two narrow bands at either end, leaving the whole medial space of the shaftment white, or more often by a single band at the upper end of the shaftment, sometimes composed of two narrow black fillets inclosing white, but usually merely black and not double.

¹See Outlines of Zuñi Creation Myths, Thirteenth Annual Report of the Bureau of Ethnology, p. 369.

In the highly finished arrows the cock or "tail" feathers were notched and tufted to correspond numerically and positionally with the bandings, for mythic reasons into which it is not necessary to enter here.

Each of the four cane slips was banded to correspond with the ribbandings of one or another of these sets of the arrows of the Four Quarters; but the paint bands (fig. 105) were almost invariably black and were placed in the concavity of the cane slips (figs. 106-9), not on the periphery (which was, however, scorched, scored, or carved to correspond), evidently to keep the paint from being worn off by handling and casting.

Thus the cane slip of the North was banded only at the middle, and was called *á-thlu-a*, or the "All Speeder," or "Sender" (*Á*, "all," and *thlu-ah*, "to run," "speed," or "stand ready").

The cane slip of the West was blackened its full length and was called *K'wi-ni-kwa*, or the "Black" (medicine), from *K'wi-ná*, "black," and *ak'-kwa*, "medicine" or "sacred."

The cane slip of the South was doubly banded, as was the arrow of the South, and was called *pathl-to-a*, or "divider divided" ("bordered, inclosed"), from *pathl-to*, "border," "edge," "end," and *oa*, "to become," "to do," or "make to do."

Finally, the cane slip of the East was banded only at one end, and was called *Ko'-ha-kwa*, the "White," or the "White Medicine" (*K'ha-na*, "white," and *ak'-kwa*, "medicine").

In addition to the banding and scoring of these cane slips, they were, in cases of great importance (as in sets made from the captured arrows of some celebrated foe-man), notched at the ends, as I have said the cock feathers were notched; but this old practice has fallen into disuse to such extent that I have seen only one venerated set so notched. In this set, if I observed aright, the notches corresponded in number as well as in place, whether at sides or in the middle of the ends, with the number and positions of the bandings and of the tuftings on the cock feathers of the arrows from which, probably, they were made. The normal numerical value of the cane slips agreed with the successional values of the regions they belonged to—that is, the slip of the North made one; that of the West two; that of the South three, and that of the East four. But as this gave unequal values, other values or counts were added, according as the slips fell concave or convex sides uppermost, and especially according to the thrower.

That this may be understood, the general nature of the game as essentially a sacred tribal process of divination must be considered. Formerly *Sho'-li-we* was exclusively a game of war divination, and was played only by Priests of the Bow, members of the esoteric society of war shamans.

These members were, according to their totems and clans, members of the clan groups corresponding to the several quarters or sacred precincts of North, West, South, East, Upper, Lower, and Middle regions. But since there were only four regions concerned in the wage of war, clansmen of the upper and nether regions were relegated to the east and west, since the places of the upper and lower regions in the sacred diagram were in the Northeast—between the East and North, and in the Southwest—between the West and South; while clansmen of the middle might, as determined by the casts of their arrow canes, belong to anyone of the other regions, since the midmost was the synthetic region, the all-containing and the all-contained place, either the first, therefore, or the last. This war game of the Priests of the Bow was played semiannually at the festivals of the Twain Gods of War, *Áhaiyuta* and *Mátsailema*, patrons of the game by virtue of the vanquishment of the Creational God of Gambling, *Mi'-si-na*, the Eagle-star God, whose forfeited head now hangs in the Milky Way, and whose birds are the god-servants of war and the plumers of the canes of war.

It is played at such times as a tribal divination; a forecast for war or peace, for prosperity or adversity, and is accompanied by tribal hazards and gambling. But at other times it is played for the determination of peace or war, of the direction or

precautions to be taken in defensive or offensive operations or preparations. As thus played, there must be four participants. Each possesses his own canes. In the uppermost room of the Pueblo (now fallen), there was formerly a shrine of the game. Here during terrific sand storms or at night the players gathered to divine. To the middle of the ceiling was suspended a *jical* or large round bowl-basket, over which a deerskin was stretched like a drumhead. Immediately below this, spread over a sacred diagram of prayer meal representing the terrace or cloud bed of the Four Quarters, on the floor, was a buffalo robe, pelt side up, head to the east, left side to the north, etc. (fig. 104). Upon this pelt a broken circle was traced either in black lines or dots, and with or without grains of corn (forty for each line, the colors corresponding to the quarters as above described), and the openings (canyons or passageways) occurring at the four points opposite the four directions. (It should be observed that a cross (+) was sometimes painted both on the center of the skin on the basket drum and on the hide beneath, the upper symbolic of *Áhaiyuta*, and the lower of *Mátsailema*, the Twin War Gods.)

The four players chose their places according to the clan groups and directions or quarters they represented: the player of the North between the eastern and northern passageway; the player of the West between the northern and western passageway, and so on. The players of the East and North represented war, and (in other modes of the game) masculinity; those of the West and South, peace and femininity.

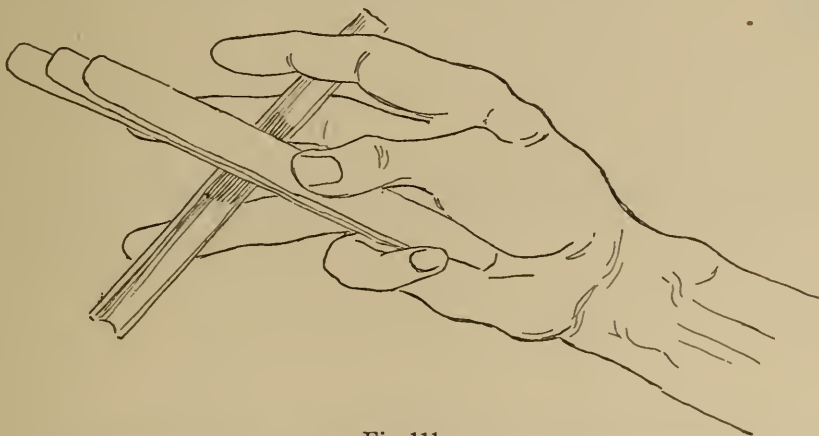


Fig. 111.

MANNER OF HOLDING CANES IN TOSSING IN GAME OF SHO'-LI-WE.

Zuñi Indians, New Mexico.

From a drawing by Frank Hamilton Cushing.

Before taking their places they muttered prayers, or rather rituals, clasping the playing canes lengthwise between the palms, breathing deeply, and from the close of the prayers, repeatedly upon them, rubbing and shuffling them vigorously, from which comes the title of a skilled player or a gambler: *shós-li*, "cane rubber" or "cane shuffler." As they took their seats, each placed under the edge of the buffalo hide in front of his place the pool, consisting of sacred white shell beads, or of little tablets representative of various properties and thus forming a kind of currency, since these little symbols were redeemable in the properties they represented or in commodities of equal value by agreement. Each also laid down at his right side on the edges of the robe over the pool two kinds of counters, usually a set of counting straws of broom grass, about six or seven inches long, worn by much use, and varying in number according to the proposed game. From ten to forty or forty-two, or from one hundred to one hundred and two (this latter divided at random into four bundles), was selected by each player. The additional counters were supplied by beans or corn grains, each set, or the set of each player, being of his appropriate color. Four splints, the moving pieces of the game, were laid in their places by the left sides of the passageways.

Each player then shuffled his cane cards back and forth in his palms as before described, as though to smooth and heat them, addressed them, especially the stick of his special quarter, as (for the East) "*Tchím-mi kó-ha-kwa tá i yäthl tá tá!*" "Now then, white one, come thou uppermost!" Then laying the all-sender (or his special slip as such) across the two middle fingers and the other three slips upon it inside of one another, his thumb pressing over their midst, the ends pointed outward over the index finger, and the bases held down to the base of the palm by the bent-over little finger (fig. 111), he quickly breathed or puffed upon them, shouted at them, and cast them skillfully against the stretched skin of the basket, so that they rebounded swiftly and fell almost unerringly within the circle on the *pé wine* or bed of buffalo hide. Now it was noted which slip lay uppermost over the others. If the White man threw, and if the white stick lay uppermost over all the others, he uttered

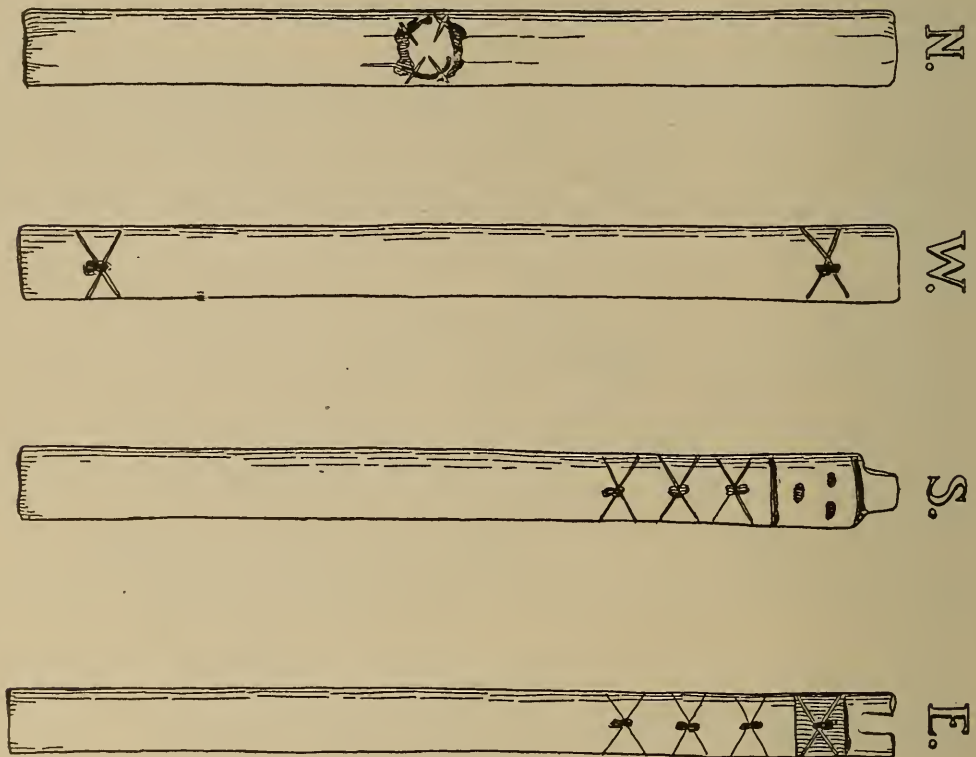


Fig. 112.

SET OF CANES FOR SHO'-LI-WE (REPRODUCTIONS).

Length, $5\frac{1}{2}$ inches.

Zuñi.

Cat. No. 16543, Museum of Archaeology, University of Pennsylvania.

thanks and the cast counted him four and gave him the privilege of another cast. If, moreover, all three slips (except his sender) lay concave sides upward, they counted him ten and gave him a second additional throw. If all three fell convex side up, they counted him five. If two concave sides and one convex side up, they counted him three, and if two convex sides and one concave side up they counted him only one. The player who had the largest number of both kinds of counts after each had tried, led off in the game and was supposed to be favored by the gods at the beginning. With but a slight change in the system of the counting, the game was continued; that is, the double counts were kept if the process included gambling—that is, "willingness to sacrifice"—but only the counts according to the regions, if the game was purely an arrow or war divination. But it is to be noted that in either case an ingenious method was resorted to in order to equalize the counts. Since the North or Yellow man could gain only one and a double throw if his slip

came uppermost, he gained the count of his opponent of the South, if his slip, the slip of the North, fell uppermost on the Red man's slips. The latter thus forfeited alike his double throw and his appropriate number, three. The tally of these purely cosmical counts was kept with the bundle of splints; the tally of the east-counts or their sums were kept with the grains by counting out, and that of the individual by moving the pointer of the passageway as many dots or grain-places to the left as the east called for. If a player of the East or North overtook a player of the West or South, if his pointer fell in the same space, he maimed his opponent—sent him back to his passageway—and robbed him of his load; that is, took or made him forfeit his counts.

The completion of the fourth circuit by any one of the players closes the ordinary game, providing the sum of the cosmical counts had been won by him, and the player who, with his partner, had the largest aggregate of both lot and cosmical counts was the winner.

There were many variants of this game as to counts. Some of these were so complicated that it was absolutely impossible for me to gain knowledge of them in the short practice I had in the play. I have given here, not very precisely or fully, the simplest form I know, except that of the lot and diagram, which was quite like that of *Ta' sho'-li-we* (or wood canes), which may be seen by the above description to be an obvious derivative both in mode and name of the older game of "canes." It was evidently thus divorced for purposes of exoteric play, as it is practiced not only by men but also by women.

Fig. 112 represents the obverse of a set of Zuñi canes for *Sho'-li-we* reproduced from memory by Mr. Cushing for the writer in the summer of 1893. It will be observed that the *a'-thlu-a*, the uppermost cane in fig. 112, corresponding with the north, is marked on the convex side with a cross, agreeing directly in this respect with one of the sticks in the Tewan game (fig. 88). This peculiarity, in one form or another, is repeated throughout almost the entire series of implements described, the obverse of one of the sticks in many of the sets being carved or burned, while in others one of the staves is tied about the middle. In attempting to account for this it occurred to the writer to compare the Zuñi stick bearing the cross mark with an *atlAtl* or throwing stick (fig. 113) from a Cliff dwelling in Mancos Canyon, Colorado, in the University of Pennsylvania Museum.

Mr. Cushing had already suggested to me that the *a'-thlu-a*, placed beneath the others in throwing corresponded with the *atlAtl*. The comparison confirmed his suggestions. The cross mark is clearly the cross wrap-

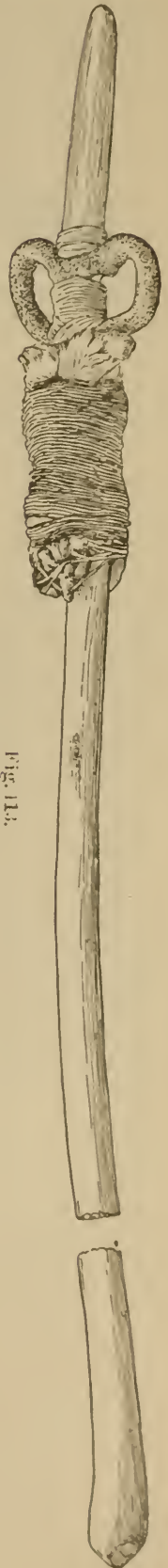


Fig. 112.

CLIFF DWELLER ATLAtl. (RESTORED).

Length, 15 inches.

Museum of Archaeology, University of Pennsylvania.

ping of the *atlatl* (fig. 114) for the attachment of finger loops. In the opinion of the writer, the Zuñi canes may be regarded as symbolic of the *atlatl* and three arrows, such as are seen carried by the gods in

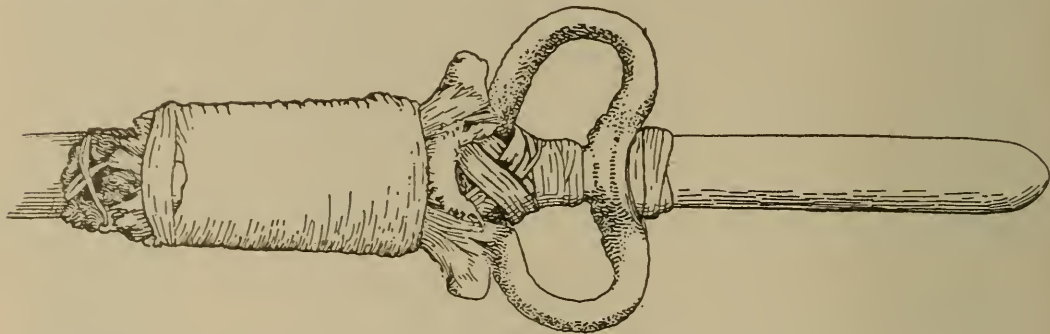


Fig. 114.

HANDLE OF ATLATL SHOWING CROSSED WRAPPING FOR ATTACHMENT OF FINGER LOOPS.

Cliff dwelling, Mancos Canyon, Colorado

Museum of Archaeology, University of Pennsylvania.

Mexican pictures. From the evidence afforded by the implements employed, the games with tossed canes, staves, etc., I conclude that they must all be referred to the region of cane arrows and the *atlatl*, probably Mexico and the southwestern United States.

A summary of the games described in the preceding pages is contained in the following tables. The games of this class I have found recorded as existing among some sixty-one tribes, comprised in twenty-three linguistic stocks, described or collected by some seventy-five observers, extending from the year 1634 down to the present, and represented by some ninety specimens from forty-one tribes, eighteen stocks, and thirty-nine collectors in the five principal American museums of ethnology: Washington, New York, Chicago, Cambridge, and Philadelphia, and the hands of five individuals. The older accounts of the game among the Indians of Mexico are not included in this enumeration.

American Indian stare and dice games.

Linguistic stock.	Tribe.	Place.	Museum.	Museum No.	Name.	Played by—
1 Algonquian	Arapaho	Indian Territory	U.S.N.M.	152802	Ta-ñ sôtá tina	Women.
2 do	do	do	do	165765		
3 do	do	do	do	165765a		
4 do	Cheyenne	do	do	152803	Mónshimúnh	Do.
5 do	do	Montana			Món shi mó ñt	Do.
6 do	Chippewa	Lake Superior region			Puggesang	
7 do	do	do			Athergain	
8 do	Illinois	Illinois			"Hubbub"	
9 do	Massachusetts	Massachusetts			Ákqa/siwók	
10 do	Menominee	Wisconsin			Wólčes tonkwón	
11 do	Micmac	Nova Scotia	M.A.U.P.	18850	Wóhmaruk	
12 do	do	do			Áhéstagen	
13 do	do	New Brunswick	M.A.U.P.	20125		
14 do	do	do	P.M.A.A. and E.	50792		
15 do	do	do	do	50804		
16 do	Narragansett	Rhode Island	↓		Wunanganbómmín	
17 do	Nipissing	Canada			Pakesanak	Do.
18 do	Norridgewock	do				
19 do	Ojibway (Chippewa)	Lake Superior region				
20 do	do	do			Beg-ga-sa	
21 do	Passamaquoddy	Maine			Ál-tes-tog-enuk	
22 do	do	do			Wy-pen-og-enuk	
23 do	Penobscot	do	M.A.U.P.	16551	Wer-lar da har-mun-gun	
24 do	do	do	do	20951		
25 do	Siksika	Canada				
26 do	do	Montana				
27 do	do	do	F.C.M.	51693	O nes tel	Do.
28 do	do	do	do	51654	Nísitaiep-skípsepian	
29 Athapascan	Apache (White Mountain)	Alberta, Canada	U.S.N.M.	152696		Do.
30 do	do	Arizona	M.A.U.P.	18619	Só-tich-ch.	Do.

American Indian stare and dice games—Continued.

	Linguistic stock.	Tribe.	Place.	Museum.	Museum. No.	Name.	Played by—
31	Athapascan	Navajo	New Mexico	U.S.N.M.	9557		Women.
32	do	do	Arizona	do	74735		Do.
33	do	do	Arizona, New Mexico.			Ts'u-dy'l.	Do.
34	do	do	do				
35	do	do		M.A.U.P.	16540	Set tilth	Do.
36	Caddoan	Arikara		U.S.N.M.	6342 6355		
37	do	do					Do.
38	do	Pawnee	Oklahoma				Do.
39	do	do					Do.
40	Eskimaan	Eskimo	St. Lawrence Bay, Alaska				
41	do	do					
42	Iroquoian	Cherokee	North Carolina				Do.
43	do	Delaware	Delaware Valley			Black eye and white eye	
44	do	Huron	Ontario, Canada				
45	do	do	do				
46	do	do	do				
47	do	do	do				
48	do	do	do				Do.
49	do	do	do				
50	do	do	do				Do.
51	do	Huron (Wyandot)	do				
52	do	Iroquois	Northern Pennsylvania and Southern New York.				
53	do	Mohawk	New York			Tsatonnageron.	Do.
54	do	do	do			Tsatnenbasimneton	
55	do	Onondaga	do			Ta-yon-nynn wát-hah	
56	do	do	do			Ta-yune-oo-wáh-es.	
57	do	Seneca	do			Gus-ga-e sá-tá	
58	do	do	do			Gus-ká-eh	

59	Iroquoian.....	Seneca.....	New York.....	M.A.U.P.....	21072	.....	Do.
60	do.....	do.....	do.....	do.....	21073	.....	Do.
61	do.....	Tuscarora.....	do.....	do.....	.....	.....	Do.
62	Keresan.....	Acoma.....	N Mexico.....	do.....	.....	.....	Do.
63	do.....	Cochit�.....	do.....	do.....	.....	.....	Do.
64	do.....	Laguna.....	do.....	do.....	.....	.....	Do.
65	do.....	San Felipe.....	do.....	do.....	.....	.....	Do.
66	do.....	Sia.....	do.....	do.....	.....	.....	Do.
67	Kiowan.....	Kiowa.....	Indian Territory.....	M.A.U.P.....	{ 16535 16536	.....	Do.
68	do.....	do.....	do.....	do.....	152908a	Tso�a	Do.
69	do.....	do.....	do.....	do.....	152908b	do	Do.
70	do.....	do.....	do.....	do.....	152908d	do	Do.
71	do.....	do.....	do.....	do.....	152908e	do	Do.
72	do.....	do.....	do.....	do.....	152909a	do	Do.
73	do.....	do.....	do.....	do.....	152909b	do	Do.
74	do.....	do.....	do.....	do.....	152909c	do	Do.
75	Koluschan.....	Tlingit.....	Shakan, Alaska.....	A.M.N.H.....	E 650	K�t chu ¹	Do.
76	do.....	do.....	do.....	do.....	E 650	.....	Do.
77	do.....	do.....	do.....	do.....	E 894	.....	Do.
78	do.....	do.....	do.....	do.....	E 1557	.....	Do.
79	do.....	do.....	Sitka, Alaska.....	do.....	E 1859	.....	Do.
80	Lutunian.....	Klamath.....	Oregon.....	U.S.N.M.....	24126	Shk�shash	Do.
81	do.....	do.....	do.....	do.....	19695	.....	Do.
82	Mariposan.....	Yokut.....	California.....	U.S.N.M.....	.....	.....	Do.
83	Natchezan.....	Natchez.....	Louisiana.....	do.....	.....	.....	Do.
84	Piman.....	Papago.....	Arizona.....	U.S.N.M.....	174516	Ghing-skoot	Do.
85	do.....	do.....	do.....	do.....	27842	.....	Do.
86	do.....	do.....	do.....	do.....	27843	.....	Do.

¹ Die called.

American Indian stare and dice games—Continued.

Linguistic stock.	Tribe.	Place.	Museum.	Museum. No.	Name.	Played by—
87 Pi-man	Pima	Arizona	U.S.N.M.	76017	.....	Men.
88 ..do	do	do	do	76018	.....	Women.
89 ..do	Tarahumara	Pueblo of Carichie, Chihuahua, Mexico.	A.M.N.H.	65 846	Ro-ma-la-ka	.....
90 ..do	Tepeguana	Chihuahua	do	65 911	In-ta-vi-ga-i-zu-li-ga-i-ra-ga-i	.....
91 ..do	do	do	do	65 910	do	.....
92 ..do	do	do	do	65 1039	do	.....
93 ..do	do	do	do	65 1038	do	.....
94 Punjuman	Nishinam	California	do	.....	Ha	Men. Women.
95 Salishan	Chehalis	Washington	.....	.....	.....	.....
96 ..do	Clallam	Port Gamble, Washington	F.C.M.	19653	.....	.....
97 ..do	Cowlitz	.....	.....	.....	.....	.....
98 ..do	Lka'ngen	Vancouver Island, British Columbia.	.....	.....	Smétalé	.....
99 ..do	Lummi	Washington	.....	.....	.....	Do.
100 ..do	Nisqually	do	.....	.....	Méh-ta-la	.....
101 ..do	Nslovakapamuk	British Columbia	A.M.N.H.	¹⁶ 953	.....	.....
102 ..do	Puyallup	Washington	.....	.....	.....	.....
103 ..do	Quenint	do	.....	.....	.....	.....
104 ..do	Shooswap	British Columbia	.....	.....	.....	.....
105 ..do	Skagit	Washington	.....	.....	.....	.....
106 ..do	Snohomish	do	.....	.....	.....	.....
107 ..do	Soke	British Columbia	.....	.....	.....	.....
108 ..do	Twana	Washington	.....	.....	.....	.....
109 ..do	.....	Tulalip Agency, Washington.	U.S.N.M.	130990	.....	Do.

ton.

110	Shahaptian	Kikitat	Washington	M.A.U.P.	20955	Do.
111	Shoshonean	Comanche	Indian Territory	U.S.N.M.	152911a	Do.
112	do	do	do	do	152911b	Do.
113	do	Painte	Utah	P.M.A.A. and E.	9411	Do.
114	do	do	Nevada	U.S.N.M.	19054	Do.
115	do	Shoshoni	Fort Hall, Idaho.	do	22285	Do.
116	do	Uinkaret	Arizona	do	11217	Do.
117	Siouan	Assinaboin	Dakota	do	8498	Do.
118	do	Dakota	South Dakota	do	153365	Do.
119	do	do	do	do		Do.
120	do	Dakota (Brulé)	South Dakota	M.A.U.P.	10442 10443 16552	Do.
121	do	Dakota (Sisseton)	Dakota			Do.
122	do	Dakota (Yankton)	do	U.S.N.M.	23556	Do.
123	do	Gros Ventres	do	do	8425	Do.
124	do	Iowa	Iowa			Do.
125	do	Mandan	North Dakota	U.S.N.M.	8427	Do.
126	do	Omaha	Nebraska			Do.
127	Tanecan	Tewa	Ideta			Do.
128	do	do	Santa Clara	U.S.N.M.	176707	Do.
129	do	do	San Ildefonso			Do.
130	do	do	Taos	M.A.U.P.	20123	Do.
131	do	do	Tesuquo			Do.
132	Wakashan	Kwakwidi	British Columbia	F.C.M.	23351	Do.
133	do	Makah	Neah Bay, Washington	U.S.N.M.	76165	Do.
134	Yuman	Cocopa	Arizona	do		Do.
135	do	Havasupai	do	U.S.N.M.	10334	Do.
136	do	Mohave	do	do	24166	Do.
137	do	do	Southern California			Do.
138	Zunian	Zuni	New Mexico	do	69355	Do.
139	do	do	do	do	69352	Do.
140	do	do	do	do	69284	Do.

American Indian stare and dice games—Continued.

	Linguistic stock.	Tribe.	Place.	Museum.	Museum No.	Name.	Played by—
141	Zuñian	Zuñi	New Mexico	U.S.N.M.	69285	Ta'-sho'-li-we	{Men. Women.
142	do	do	do	do	69004	do	Do.
143	do	do	do	do	69354	do	Do.
144	do	do	do	do	69340	do	Do.
145	do	do	do	do	69287	do	Do.
146	do	do	do	do	69281	do	Do.
147	do	do	do	do	69003	do	Do.
148	do	do	do	M.A.U.P.	16531	Tau-thla-nah-na-sho'-li-we	Men.
149	do	do	do	do	20031	Sho'-li-we	Do.
150	do	do	do	U.S.N.M.	69289	do	
151	do	do	do				
152	do	do	do	U.S.N.M.	69277	Sho'-li-we	Do.
153	do	do	do	do	69278	do	Do.
154	do	do	do	do		Thlad-pa-tsi-we	
155		Zaque	Sinaloa, Mexico			K6-zu-to	

American Indian stare and dice games—Continued.

For determining number.				Implements.		For counting.				Collector.
Objects.	Number.	Material.	Length. Diameter.*	How used.	Circuit.			Counters.		
					Material.	Form.	Size.	Num- ber of divi- sions.	Material.		Num- ber.
1 Diamond-shaped and rec- tangular blocks.	5	Bone.....	3 and 1½	In basket...					Sticks	James Mooney.
2 Diamond-shaped blocks...	5	do	1½	do						H. R. Voth.
3 Oval blocks.	5	Wood.	1½	do						Do.
4 Round and diamond- shaped blocks.	5	Bone.....		do					Sticks	James Mooney.
5 Plum stones	5			do					do	8
6 Miscellaneous objects.	13	9 bone; 4 brass.		In bowl						George Bird Grinnell. Henry R. Schoolcraft.
7 Beans.				do						J. Long.
8 Plum stones										J. Hammond Trumbull.
9	5	Bone.....		In tray (bowl)						W. Wood.
10 Disks.	8	Horn.....	* ¾	In bowl					Twigs	40 Walter J. Hoffman.
11 do	6	Bone.....	* ½	do					Splints.	51 + 4 Stansbury Hager.
12 do	6	do	* 1½	On ground						Do.
13 do	6	do	* 1	In bowl					Splints.	48 + 4 George E. Starr.
14 do	5	Antler	* ¾ to ¾	do						48 + 4
15 do	6	do	* ¾ to ¾	do						50 + 4 G. M. West.
16 Plum stones				In tray						Roger Williams.
17 do	5									J. A. Cuod.
18 Disks	8			In bowl						S. Rasles.
19 Plum stones	7			do						Peter Jones.
20	Not less than 9.	Wood, bone, or brass.		do						John Tanner.

38	Plum stones	5	In basket				Sticks	George Bird Grinnell.
39			In bowl					Z. M. Pike.
40	Carved birds	Ivory						Benjamin Sharp.
41	Carved ducks	do						Charles Francis Hall.
42	Beans	6	In basket				Beans	Mrs. Starr Hayes.
43	Plum stones		In bowl					G. H. Loskiel.
44	do	6	do					J. Brecheuf.
45		6 or 8	do					P. de Charlevoix.
46	Plum stones		do					J. Lalemant.
47	do	6	do					Nicolas Perrott.
48	do	8	On blanket					Do.
49	do	5 or 6	In bowl					Sagard Theodat.
50	do	5 or 6	On skin					Do.
51	do		In bowl					Col. James Smith.
52	do		do					G. H. Loskiel.
53			do					Jacques Bruyas.
54	Fruit stones		Thrown with hand.					Do.
55	Disks	8 Bone or stone	do				Beans	W. M. Beauchamp.
56	Peach stones	6	In bowl				do	Do.
57	Disks	8 Elk horn	Tossed on blanket.				do	L. H. Morgan.
58	Peach stones	6	In bowl				do	Do.
59	Disks		do					J. N. B. Hewitt.
60	Peach stones		do					Do.
61			do					Do.
62	Staves							Charles F. Lummis.
63	do							Do.
64	do	3 Wood	4 Struck on stone.	Pebbles	Circle			George H. Pradt.
65	do							Charles F. Lummis.
66	Blocks	4 Wood	Struck on stones.	Pebbles	Square	40		Mrs. M. C. Stevenson.
67	Staves	4	do	Cotton cloth		50	Sticks	H. L. Scott.
68	do	4 Willow	7 do	Blanket		40	do	James Mooney.

American Indian stare and dice games—Continued.

Implements.									
For determining number.				For counting.					
Objects.	Number.	Material.	Length. Diameter.*	How used.	Circuit.			Counters.	
					Material.	Form.	Size.	Material.	Num- ber.
69 Staves.....	4	Alder.....	5½	Struck on stone.	Blanket.....	Square	.....	Sticks...	.....
70 ....do.....	4	Willow or chestnut.	8½	do.....	do.....	do.....	.....	.....do.....	.....
71 ....do.....	4	Elm.....	8½	do.....	do.....	do.....	.....	.....do.....	.....
72 ....do.....	4	.....	5½	do.....	do.....	do.....	.....	.....do.....	.....
73 ....do.....	4	.....	4½	do.....	do.....	do.....	.....	.....do.....	.....
74 ....do.....	4	.....	5½	do.....	do.....	do.....	.....	.....do.....	.....
75 "Die".....	1	Ivory.....	1	On leather tablet.	do.....	do.....	.....	.....do.....	.....
76 ....do.....	1	Wood.....	.....	.....do.....	do.....	do.....	.....	.....do.....	.....
77 ....do.....	1	Ivory.....	1	do.....	do.....	do.....	.....	.....do.....	.....
78 ....do.....	1	Wood.....	1½	do.....	do.....	do.....	.....	.....do.....	.....
79 ....do.....	1	Ivory.....	1½	do.....	do.....	do.....	.....	.....do.....	.....
80 Woodchuck teeth.....	4	.....	1¼ to 1¾	do.....	do.....	do.....	.....	.....do.....	.....
81 Beaver teeth.....	4	.....	.....	Drop on stone.	do.....	do.....	.....	Sticks..	12.....
82 Walnut shells.....	8	.....	* 1	In basket...	do.....	do.....	.....	.....do.....	15.....
83 Staves.....	3	Split cane..	8 to 9	Struck from hand.	do.....	do.....	.....	.....do.....	.....
84 ....do.....	4	Cactus.....	9½	Struck on stone.	Holes in ground.	Rectan- gle.	12 by 8 feet.	do.....	.....
85 ....do.....	4	Willow.....	9	do.....	do.....	do.....	.....	.....do.....	.....

Collector.

James Mooney.

Do.

Do.

Do.

Do.

Do.

George T. Emmons.

Do.

Do.

Do.

Do.

L. S. Dyer.

A. S. Gatschet.

Stephen Powers.

Le Page du Pratz.

W J McGee.

Mrs. G. Stout.

[illegible]

134	Staves	4	Willow	8	On stone.	Stones	Circle			Edward Palmer.
135	do	3								G. Wharton James
136	Blocks	4	Willow	6½						Edward Palmer.
137	do	4	do	6						Do.
138	Staves	3	Piñon	5½	Struck on stone.	Circle of stones.	Circular	40	Beans or corn.	James Stevenson.
139	do	3	do	5½	do	do	do	40	do	Do.
140	do	3	do	5½	do	do	do	40	do	Do.
141	do	3	Larch	5½	do	do	do	40	do	Do.
142	do	3	Piñon	3¾	do	do	do	40	do	Do.
143	do	3	do	5½	do	do	do	40	do	Do.
144	do	3	do	6	do	do	do	40	do	Do.
145	do	3	White pine	4	do	do	do	40	do	Do.
146	do	3	Yellow pine	5½	do	do	do	40	do	Do.
147	do	3	Bass	4½	do	do	do	40	do	Do.
148	do	3	Piñon	4	do	do	do	40	do	Do.
149	do	4	Reed	5½	Tossed upward against skin stretched over basket.	do	do	40	do	F. H. Cushing.
150	do	4	do	7¾						Do.
151	do	4	do	7						James Stevenson.
152	do	4	do	6½						Do.
153	do	4	do	6						James Stevenson.
154	Blocks	3	Wood		In basket					F. H. Cushing.
155	Staves	4	Reed							C. V. Hartman.

In the summer of 1896, Dr. J. Walter Fewkes, while engaged in explorations for the Bureau of American Ethnology, found several ancient split reeds marked in a similar manner to those used in the Zuñi game of *Sho'-li-we*. These reeds, represented in plate 15, were dug up by him at the Cherlon ruin, near where the Cherlon Fork empties into the Little Colorado, about 15 miles east of Winslow, Arizona. He writes:

I have no means of knowing how old Cherlon ruin is, but very old—no white man's objects were unearthed there. There were settlements in the vicinity as late as 1700. This may have been one, but I judge from the ruin and legends that it was much older. The ruin of Cherlon, like many on the banks of the Little Colorado, shows resemblances to ruins on Zuñi River, and no doubt has relations with them. The Southern Hopi clans claim them, and I fancy both Zuñi and Moki are related to the clans of Cakwabayñ, "Blue Running Water House."

I am indebted to Mr. Wells M. Sawyer, of the Bureau of American Ethnology, for the careful drawing (Plate 15) showing the marks on the reeds. One reed is apparently without marks on the exterior, and of the four others two have the same marks, from which the writer infers that they form part of at least two original sets. During the same

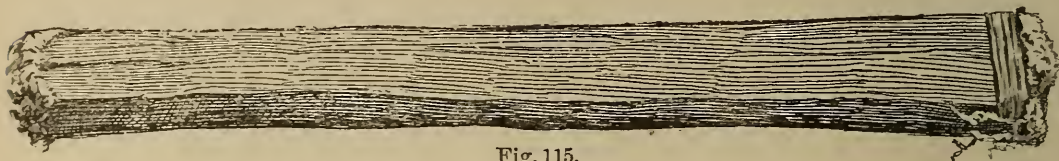


Fig. 115.

STAVE FOR GAME.

Length, 7 inches.

Cliff dwellings of Mancos Canyon, Colorado.

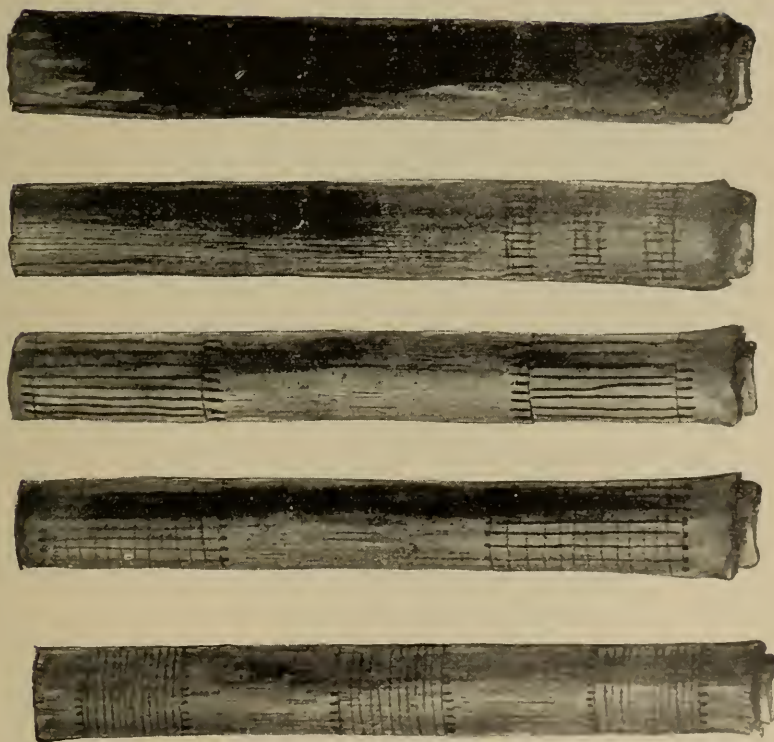
Museum of Archaeology, University of Pennsylvania.

season's work, Dr. Fewkes excavated a bowl (Cat. No. 157735, U.S.N.M.) from the old ruin of Cuñopavi containing a symbolic pictograph of a bird, and a representation of the four reed or stave casts (Plate 16). This bowl was dug up from the old cemetery. Old Cuñopavi, or Shimopavi, as it is commonly written, he informs me, was inhabited in 1540, and the people moved to the present site about the end of the seventeenth century. "The bowl is of the same ware as the prehistoric pottery of Tusayan, and I think it older than 1540, but that is not proven. The bird is Kwataka, 'Eagle Man,' an old crony of gamblers."

Additional evidence of the antiquity of the stave game in North America is afforded by a prehistoric stave of cotton wood (fig. 115), (Mus. Arch., Univ. Penn.), tied at one end with sinew to prevent its splitting, and practically identical with the Navajo staves of cotton wood (Cat. No. 9557, U.S.N.M.), which was found by the Wetherill Brothers in a prehistoric Cliff dwelling in Mancos Canyon, Colorado.

In ancient Mexico, among the cultivated Aztecs, we find mention of the "game of the canes" under the names of *cauallopan* and *nemimina-*

¹ Identified by Mr. Cushing with *Mi'-si-na* referred to in his account of *Sho'-li-we*.



GAMBLING REEDS.
(Restored.)

Cherlon ruin, Arizona.

Cat. No. 158030, U.S.N.M. Collected by Dr. J. Walter Fewkes.



DECORATED POTTERY BOWL WITH "EAGLE MAN" AND
GAMING-REED CASTS.

Cuñopavi.

Cat. No. 157735, U.S.N.M. Collected by Dr. J. Walter Fewkes.

liztli in Molina's dictionary. Dr. Brinton informs me that the combination *cauallopan nemiminaliztli* is defined by R. Simeon, in his *Dictionnaire de la langue Nahuatl*, as "playing with horses." Again Molino gives *neyayaotlaliztli* = "juego de canas, o escaramuza" (skirmish) and juegos de pelea (war) = *neyayaotlaliztli*.

A reference to the cane game is to be found in Torquemada.¹ Speaking of the ceremonies in honor of Tlaloc² he says:

The day on which they held feast to these gods was in the sixth month, which corresponds to our June. On this day they cleansed all cisterns and water conduits and played with green maize stalks.

Again, in the "Hymn of Tlaloc"³ occurs the passage:

In Tlalocan, in the verdant house, they play at ball, they cast the reeds.

Duran⁴ (somewhat confusedly) describes a game with tossed canes as follows:

There was another game, which was that they made on a plaster floor little hollows after the manner of a *fortuna* (wheel of fortune?), and one took ten pebbles and the other ten others, and the one placing his pebbles on the one edge and the other on the other on contrary sides, and taking some reeds split down the middle they threw them on the ground so that they sprang up, and as many reeds as fell with the hollow side upward so many "houses" he moved his pebbles forward, and thus one such followed the other, and all pebbles as he overtook, he went on taking away until he left his adversary without any.⁵ (The meaning of the clause that follows is not clear.)

The game of *Patolli* (No. 39) by which we now generally understand the game played with marked beans instead of canes or staves, upon a cross shaped diagram, is probably a derived form of the cane game, the use of beans being paralleled at the present day among the Cherokee (see p. 720). The word was a general name for games and was also applied to the "dice," by which they were counted. Ribas uses it in that sense in the account which follows, referring to the Indians of Sinaloa:

The game that they call of the *Patolli* is very common among them and corresponds to that of cards or dice, because in place of them they use certain four small

¹ Monarchia Indiana, II, p. 147.

² The deity who presided over the waters, the rains, the thunder, and the lightning. The annual festival in his honor took place about the time of the corn planting, and was intended to secure his favor for this all-important crop. Rig Veda Americanus, Daniel G. Brinton, Philadelphia, 1890, p. 25.

³ Rig Veda Americanus, p. 24.

⁴ Diego Duran, Historia de las Indias, III, Cap. XXII. A translation is given by Tylor. On American Lot Games, p. 8.

⁵ Había otro juego que era que hacían encima de un encalado unos oyos pequenitos á manera de fortuna y el uno tomaba diez piedras y el otro otras diez y el uno ponía sus piedras por la una acera y el otro por la otra en contrarias partes e con unas cañuelas hendidas por medio daban en el suelo y saltaban en alto y tantas cuantas cañuelas caían lo güecò hacía arriba tantas casas adelantaba sus piedras y así seguían el uno al otro y todas cuantas chinás le alcanzaba se las iba quitando hasta dejalle sin ninguna y acontecía habelle quitado cinco y seis y con las cuatro que le quedaban decirle tambien las cañuelas que revolvía sobre el otro y ganalle el juego.

canes, scratched, less in length than a span, and upon these they have certain small figures and points which give them their value or loss. When they play they throw these down, casting them upon a small stone in order that they may rebound and fall with their points at random, and he who plays wins or loses, marking on the earth the points which gain until the number is reached of the wager which those present have made. This wager is of beads of shells of the sea which they esteem and with which they adorn themselves. Wagers are also made of bows, or arrows, or knives, articles they obtain; and of the same character are their wagers in other games.¹

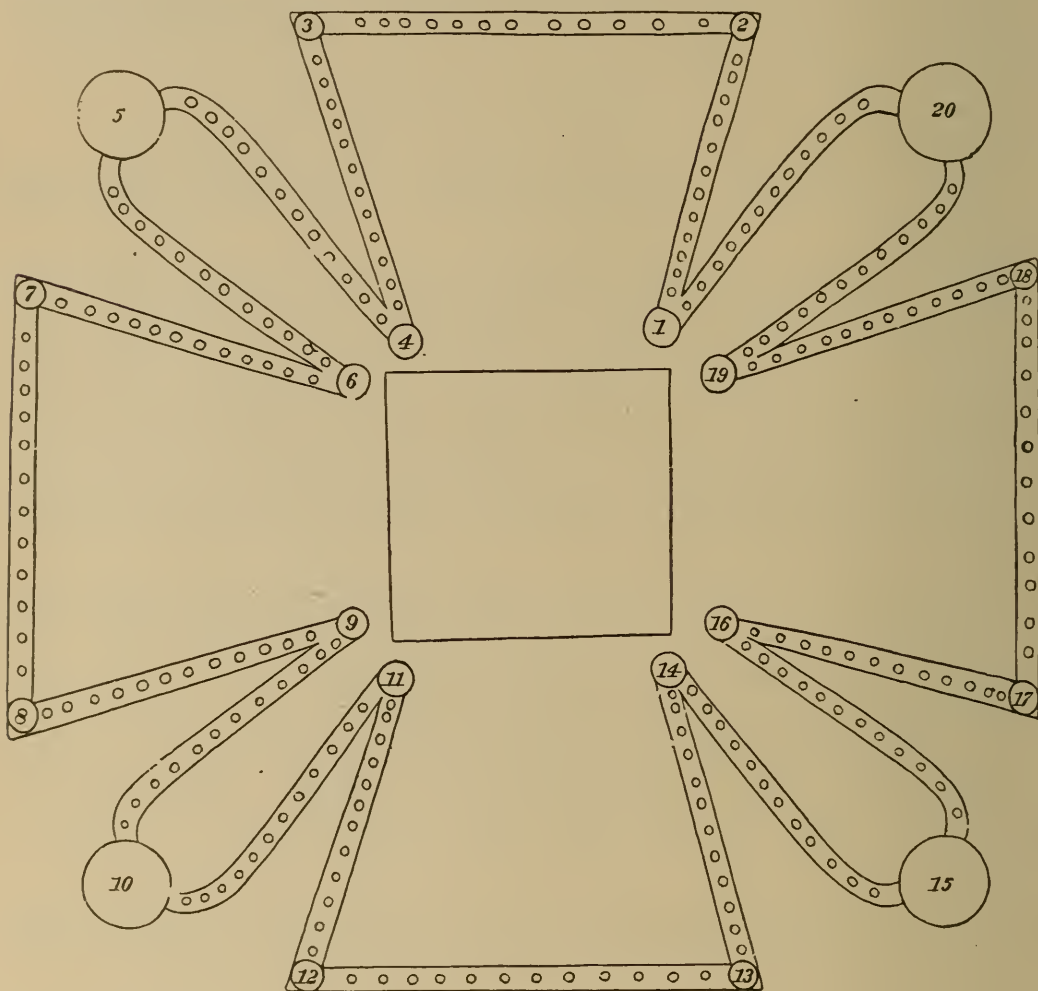


Fig. 116.

SCHEME OF PLATE 44, FÉJÉRVARY CODEX.

After Cyrus Thomas.

¹ El juego que llaman del Patoli es muy general en ellos, y corresponde al de los naipes o dados. Porque en lugar dellos usan de unas quatro cañitas cortas, rajadas, menores de un gemo, y en ellas tienen unas figurillas y puntos, que les da el valor, ó pérdida. Estas quando juegan las botan, arrojándolas sobre una pedrecita, para que salten, y caigan los puntos á su ventura, y gane, o pierda el que las juega, rayando en la tierra los puntos que ganan, hasta cumplir el número de la apuesta, que se hacen allí presente. Esta es de sartas de caracolillos de mar que ellos estiman, y con que se adornan. Tambien sirve de posta, arcos o flechas, cuchillos, o achuelas que alcanzan: y de lo mismo suelen ser las apuestas de otros juegos.

Perez de Ribas, Historia de los Triumphos, Lib. 1, Cap. IV, Madrid, 1645.

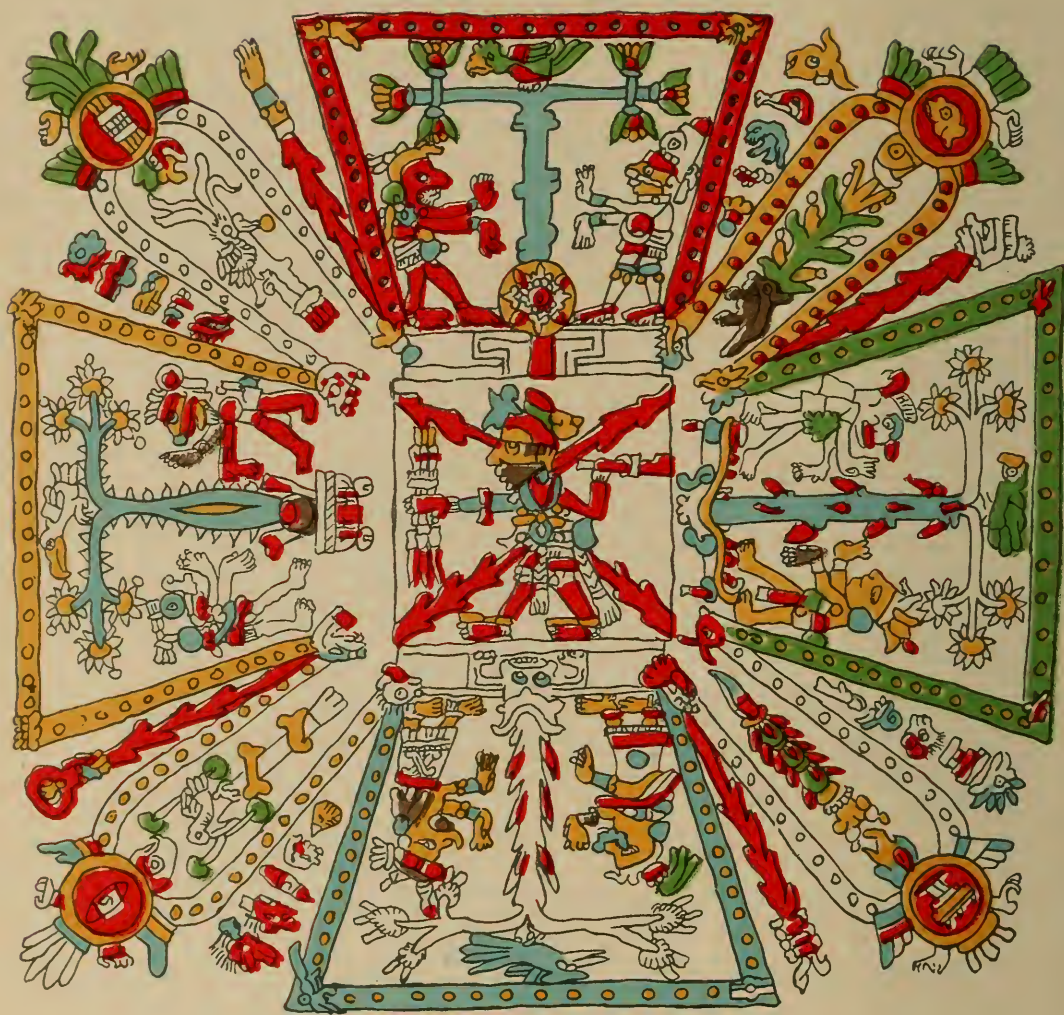


PLATE 44, FEJERVARY CODEX.

In searching for remains of the cane game in old Mexico, the writer was deeply impressed with the many points of resemblance between the gaming circuit as described by Mr. Cushing as used in *Sho'-li-we*, and some of the diagrammatic paintings in the codices, leading him to the conclusion that the purpose of the latter was identical. As an illustration, the figure from the F  j  rvar  y codex (Plate 17) may be regarded as a divinatory, calendrical counting circuit, the forty beans or corn of four colors of the Zu  ni *Sho'-li-we* having their counterparts in the four colored arms of the cross—red, yellow, blue, and green—marked with small circles. Again the entire design of the Mexican figure will be seen to represent an animal or the hide of an animal, comparable with the buffalo hide of the Zu  ni game. In the center of the Mexican

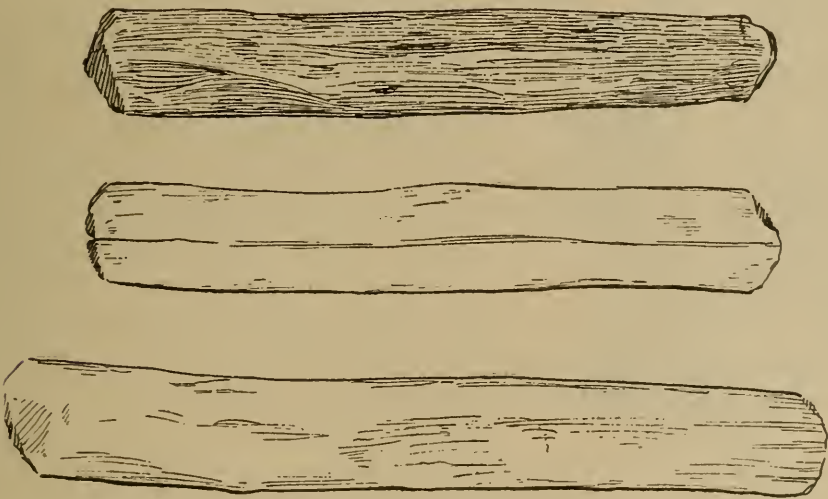


Fig. 117.

SET OF STICKS FOR GAME.

Lengths, $3\frac{1}{4}$ and $3\frac{3}{8}$ inches.

Toba Indians, Grand Chaco, South America.

Cat. No. 1799, Field Columbian Museum. Hassler collection.

picture is a figure of a warrior god or priest, armed with *atlatl* and darts, corresponding to the cross, symbolic of the twin war god of the Zu  ni circuit. The scheme of the plate from Prof. Cyrus Thomas's *Notes on certain Maya and Mexican Manuscripts*¹ is added (fig. 116) to facilitate comparison.

From South America the following sets of implements have been collected:

TOBA TRIBE, CHACO INDIANS. Cat. No. 1799, Field Columbian Museum, Chicago. Hassler collection.

Three sticks roughly whittled from small twigs (fig. 117). Two of them $3\frac{1}{4}$ inches in length, $\frac{1}{2}$ inch wide, and about $\frac{1}{8}$ inch thick, slightly rounded on one side, which is blackened, while the other is flat and

¹Third Annual Report Bureau of Ethnology.

plain. The third stick is about $3\frac{7}{8}$ inches in length, made of another wood, and possibly belongs to another set. Collected by Dr. Emil Hassler. Dr. Hassler informed the writer that they are tossed in the air and if three round sides fall uppermost they gain. "The sticks must fall parallel."

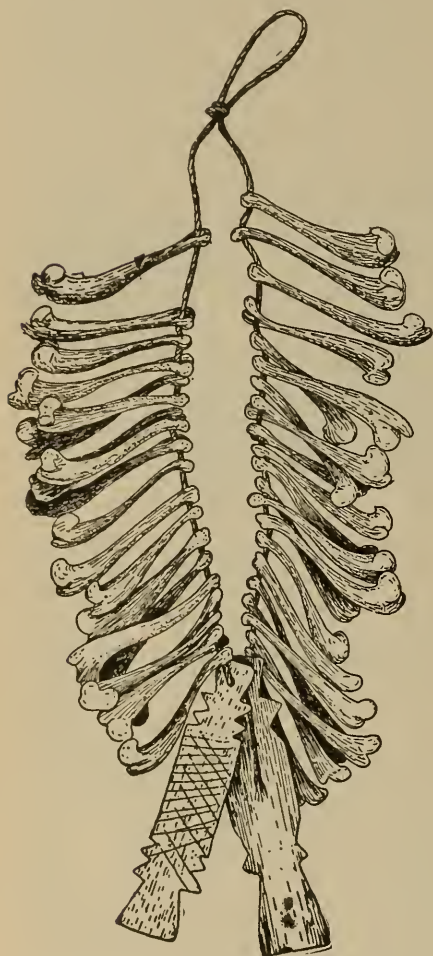


Fig. 118.

PAIR OF BONES AND COUNTERS FOR GAME.

Grand Chaco Indians.

Field Columbian Museum. Hassler collection.

Referring to the Toba, Cardus¹ says:

Their principal game consists in raising and letting fall to the ground some small pieces of split reed with much shouting; the object of the shouting, on one side, that the pieces may fall well, and on the other that they may fall badly. The stakes are usually a horse, a cow, a slave, a sheep, or a poncho.

Another set of similar gambling instruments from the Indians of the Grand Chaco are represented in fig. 118. They were exhibited by Dr. Hassler in his collection at the Columbian Exposition, but unfortunately can not now be found in the Field Columbian Museum, to which the collection was transferred. The two large bones are tossed, their falls determining the count, which is recorded by means of the small radial bones that are strung upon the cord. The men who play this game carry the implements suspended from their wrist.² The games above described led the writer to make a particularly careful search for objects that might have served for gaming implements in collections from ancient Peru. In the collection made by Dr. Max Uhle, at Pachacamac,

for the University of Pennsylvania, now in its Museum, are a number of narrow, flat tablets of hard wood that might possibly have been used as gaming staves. The same conjecture might be hazarded with reference to six slips of cane (Cat. No. 28393) found together on a mummy in the first cemetery. These slips, which are 4 inches in length by about $\frac{1}{2}$ inch in width, are wound with colored thread, black, yellow,

¹ Las Misiones Franciscanas entre los infideles de Bolivia por el R. P. Fr. José Cardus, Barcelona, 1886, p. 263.

² I find the following reference to games of this type among the South American Indians: Molina (History of Chili, II, p. 9), in describing the games of the Araucanians, says, "the game of *quechu*, which they esteem highly, has a great affinity to that of backgammon, but instead of dice they make use of triangular pieces of bone marked with points, which they throw with a little hoop or circle supported by two pegs, as was probably the *fritillus* of the ancient Romans."

and red, in bands of varying width. The arrangement of the colors varies on each of the six slips.

William Bollaert¹ describes a game of the Aymara Indians under the name of *pasa*.

It is one of great antiquity, and seems to be the only one of this sort. *Pasa* means a hundred, as he wins who first gets that number. They play it with two instruments, one a spread eagle of wood with ten holes on each side, being tens, and are marked with pegs to denote every man's gettings; the other is a bone in the manner of a die, cut with seven faces, one of which has a particular mark called *guayaro* (*huyaru*). The other five tell according to the number of them, and the last is a blank. The way of playing is to toss up the bone, and the marks on the upper surface are so many got. But the *guayro* goes for ten, and the like number is lost if the blank side appears.²

Von Tschudi³ describes the following game:

Pitška, a game with small sticks which were marked with stripes of different colors. It was generally played during the night of the death watch. Villagomez believes that its name is derived from *Pitška*, the number "five" because of the five fast days following the night of the death watch, a view which I do not accept. Holguin mentions the game *Pitška*, and refers to *Pitškana* as a six-sided piece of wood or small stick with which the game is played, only we do not know how it was done but probably in a similar way to the game of dice. In Aymara its name is also *Phiska*.

4. TAB. Cairo, Egypt.

Board, staves,⁴ and men. A game played upon a board divided into rows of squares, with pieces or men, which are moved according to the throws with four staves (fig. 119).

The board, called a *seegà* (fig. 120), is divided into four rows of squares called *beyts* (houses) each about 2 inches wide, or it consists of similar rows of holes made in the ground or in a flat stone. The *beyts* are usually seven, nine, eleven, thirteen, or fifteen in each row. In each *beyt* of one exterior row is placed a little piece of stone or dingy brick about the size of a walnut, and in each *beyt* of the other exterior row a piece of red brick or tile, or sometimes pieces are placed in only

¹ Antiquarian, Ethnological and other Researches in New Granada, Equador, Peru, and Chili, London, 1860, p. 168.

² Referring to the above account, Dr. Brinton tells me that the exact form, *pasa*, as a numeral, does not appear to prevail in Aymara or Quichua. In Aymara we have:

paa or *paya* = 2 or twice

pusi = 4

pataca = 100

In Quichua:

pussac = 8

pachac = 100

"I do not find *guayaro* or *huyaru* in either tongue, although there are a number of words close to them."

³ Zeiträge zur Kenntniss des alten Peru, Wein, 1891, p. 217.

⁴ Cat. No. 16896, Mus. Arch., Univ. Penn. Made in Streets of Cairo, Columbian Exposition, Chicago, 1893.

a certain number of *beyts* in those rows, as for instance in the first four. The pieces of one row must be distinguished from those in the other.

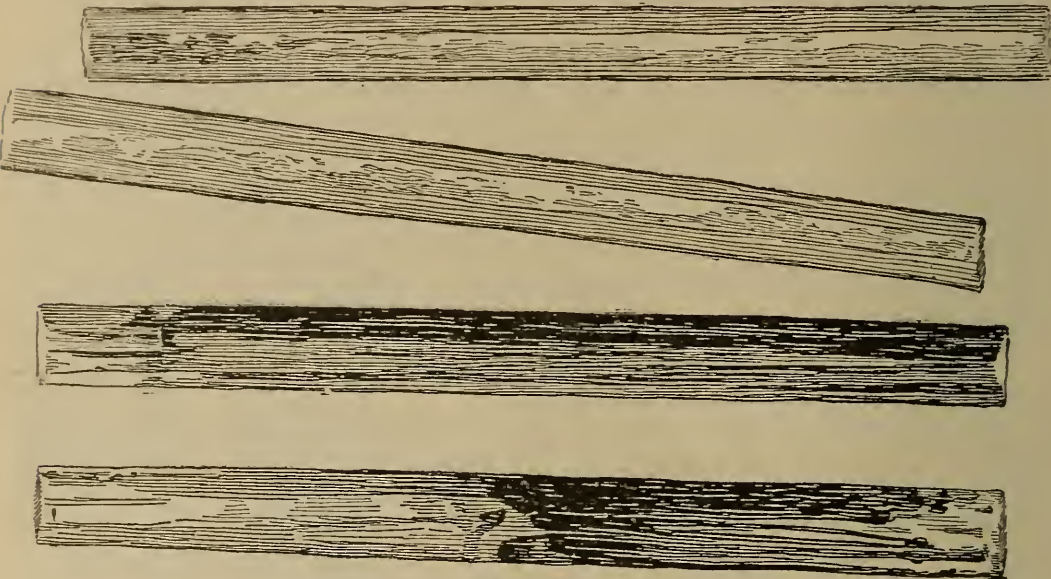


Fig. 119.

CANES FOR TÁB.

Length, 8 inches.

Cairo, Egypt.

Cat. No. 16396, Museum of Archaeology, University of Pennsylvania.

They are called *kiláb*, or “dogs;” in the singular, *kelb*. The game is generally played by two persons. The four sticks consist of pieces of palm branch, about 8 inches in length, one side of which, being cut flat

i	h	g	f	e	d	c	b	a
k	l	m	n	o	p	q	r	s
S	R	Q	P	O	N	M	L	K
A	B	C	D	E	F	G	H	I

Fig. 120.

BOARD (*seegá*) FOR TÁB.

Egypt.

From Lane.

and smooth, is white; the other green, or, if not fresh, of a dull yellow color; the former side is commonly called white and the other black. The four sticks are thrown, all together, against a stick thrust into the

ground or against a wall, or against a stick inclined against a wall. The throws count as follows:

1 white side up, called <i>táb</i> , or <i>weled</i> , "child" = 1.	
2 white sides up	= 2.
3 white sides up	= 3.
4 white sides up	= 4.
4 black sides up	= 6.

A throw of 4 or 6 entitles the player to throw again.¹

The name of the board in this game, *seegà*, appears to be an Arabized form of the Indian word *saj*, "teak." According to native lexicographers it is applied to wood, black and heavy and made in pieces of oblong form or squared, brought from India. In the sense of board it was originally applied to the tablet made of *saj* wood. The name given to the men, "dogs," is the same as that applied to the men in the game of *Kawade kelia* (No. 37) in Ceylon. These facts would seem to

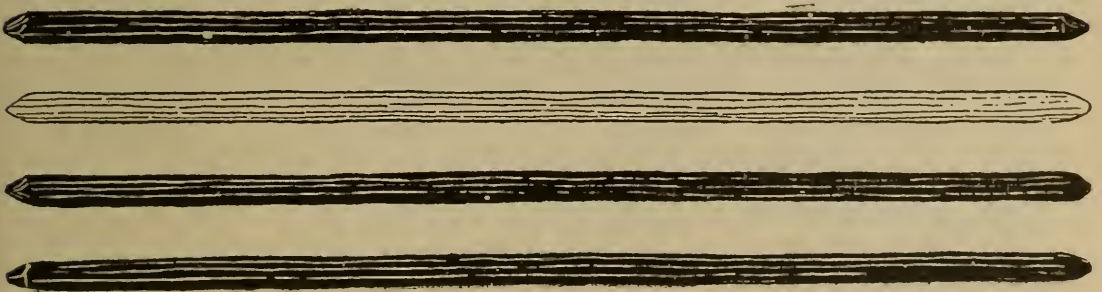


Fig. 121.

CANES FOR GAME.

Length, $8\frac{1}{4}$ inches.

Singapore, Straits Settlements.

Cat. No. 175222, U.S.N.M.

indicate an Asiatic origin for the game of *Táb*. According to Dr. Hyde it was known to the Persians under the name of *Bazi kamish*, that is, the "Reed game."

The following game, No. 5, from Singapore, affords an illustration of its wide distribution in Asia:

5. GAME STICKS.² Singapore, Straits Settlements.

Set of four bamboo staves about $8\frac{1}{4}$ inches in length, painted black with Chinese ink on one side (fig. 121). Evidently intended for a game like *Táb*.

In closing this account of the use of the tossed staves in divination and gambling in the Old World it is fitting to mention the references to similar customs by the classical authors. Thus Tacitus³ describes the Germans as "cutting a twig from a fruit tree and dividing it into

¹ For a further account of the method of play, consult Edward William Lane, *Manners and Customs of the Modern Egyptians*, II, p. 49.

² (Cat. No. 175222, U.S.N.M.) Collected by Hon. Rounseville Wildman, U. S. Consul-General, Singapore.

³ *Germania*, X.

⁴ Dr. O. Schrader, "Oak, beech," *Prehistoric Antiquities of the Aryan Peoples*, London, 1890, p. 279.

small pieces, which, distinguished by certain marks, are thrown promiscuously upon a white garment. Then the priest of the canton, if the occasion be public (if private, the master of the family), after an invocation of the gods, with his eyes lifted up to heaven, thrice takes out each piece, and, as they come up, interprets their signification according to the marks fixed upon them. If the result prove unfavorable, there is no more consultation upon the same affair that day; if propitious, a consultation by omens is still required."

More closely resembling the practices described in the text is the German method of divination as related by Saxo-Grammaticus¹ of the inhabitants of the Isle of Rugen, in the Baltic Sea:

Throwing, by way of lots, three pieces of wood, white in one part and black in another, into their laps, they foretold good fortune by the coming up of the white; bad by that of the black.



Fig. 122.

BARESMA.

Length, 5 inches.

From drawing of originals in the possession of Prof. A. V. Williams Jackson.

The reference in Herodotus² to divination among the Scythians, in which large bundles of rods were used, seems to refer to the class of divinatory rites that will be treated in the second part of this paper.

Lenormand³ states that the Magi foretold the future by throwing little sticks of tamarisk wood. The authority which he cites⁴ makes no specific mention of any such performance, but merely says that the "Magi and Scythians prophesy with staves (*ligno*); and in many places prophesying they use twigs (*virgis*). Dinon says that the Median magi also prophesy by twigs (*virga*)." Dinon no doubt referred to the *baresma*, of which mention is also made by Strabo.⁵

The *baresma* (now called *barsom*) was a bundle of sacred twigs which the priest held in his hands while reciting the prayers (Plate 18). They were formerly twigs of the pomegranate, date, or tamarind tree, or any tree that had no thorns, and were plucked with peculiar ceremonies which alone made them fit to be used for liturgic purposes.⁶

¹ Hist. Dan., XIV, p. 288.

² Volume IV, p. 67.

³ Chaldean Magic, London, 1877, p. 237.

⁴ Schol. Nicandr. Theriac, V, p. 613.

⁵ "They (the Magi) continue their incantations * * * holding before the fire a bundle of rods," XV, Cap. 3.

⁶ The Zend Avesta. Translated by James Darmsteter, Oxford, 1880. *Vendidād*, III, Pt. 1, p. 22, note 2. The Parsis in India found it convenient to replace them with brass wires, which when once consecrated can be used for an indefinite period. (*Ibid.*)



Admodum Reverendo in Christo Patri RICHARDO Div. perm. Episcopo Petroburgensi hanc Tabulam Gratitude erig. lubens merit. D.D.D. Autor T.H.

de n. ABurg. fecit. Vni. Ox.

MAGI WITH BARESMAS.

From Hyde's Historia Religionis Veterum Persarum.

Lenormand declares that the *baresma* originated in a bundle of divining wands, such as were thrown in Chaldea and Babylonia. Madam Ragozin,¹ following the same line of comparison, points out the resemblance between the *baresma* (fig. 123) and a peculiar object (fig. 124) which frequently recurs deposited upon the altar in Assyrian scenes of worship and sacrifice. "The use of it, or the nature, has never yet been explained; but on close inspection it looks extremely like a bundle of twigs, uneven in number, tied together with a ribbon. Is it not likely that it may represent the sacred divining rods and be the original of the Avestan *baresma*?"

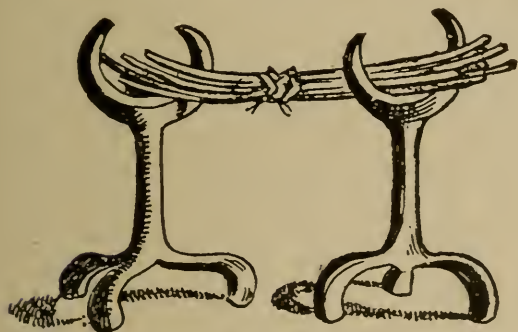


Fig. 123.

BARESMA (*barsom*) WITH STAND.

Modern Persia.

From drawing in the Story of Media, Babylon and Persia.

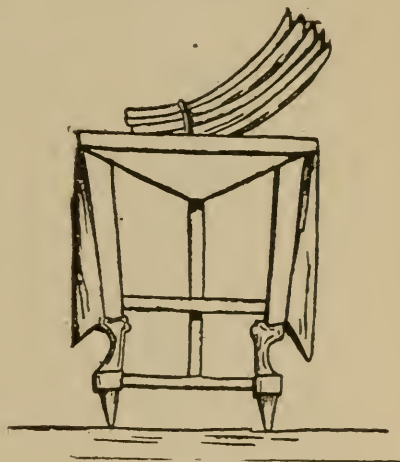


Fig. 124.

ASSYRIAN ALTAR.

Compare Baresma with stand, fig. 123.

From drawing in the Story of Media, Babylon and Persia.

In ancient China the nobles of the highest ranks carried scepters of jade stone,² the name of which, *kuai*, is written with a character, which compounded with the radical for "hand," stands for *kuá*, "to divine with straws," No. 65; and again, with *puk*, "to divine," written on the right, for the *kuá* or divinatory diagrams formed of unbroken and broken lines.³ These diagrams may be regarded as representing the permutations of two-faced staves, three producing the trigrams (fig. 5),

I am indebted to Prof. A. V. Williams Jackson, of Columbia University, for an opportunity to examine a set of *baresma*, presented to him with a set of sacrificial implements by Mr. Dinshah Pestanji Framji Ghadiali. They consist of a bundle of forty-three bright brass wires 5 inches in length (fig. 122). In reply to my inquiry he writes that the number in this particular specimen is evidently a matter of chance, and he furnishes me with the following reference:

Haug's Essays on the Parsis, p. 397 (third edition, by E. W. West), says:

"The *barsom* consists of a number of slender rods or *tāi*, formerly twigs of some particular trees, but now thin metal wires are generally used. The number of these *tāi* depends upon the nature of the ceremony to be celebrated. For *Ijashne* (*yazishn*) alone 21 *tāi* are required; for *Ijashne*, with *Vendidād* and *Visparad*, 33 *tāi*; for *Yasht-i Rapithwin* 13 *tāi*; for *Darūn Bāj* 5 *tāi*, or 7 when a priest becomes a *herbad*."

¹ Zenaide A. Ragozin, *The Story of Media, Babylon, and Persia*, New York, 1888, p. 149.

² The *kau pui* or divinations blocks (fig. 212), were originally made of stone.

³ The Book of History states that in the first month (the time when divination was especially practiced) the Emperor collected the five kinds of scepters, and at the expiration of the month he gave them back to the various chiefs.

and six the hexagrams (fig. 4). These tablets, *kwai*, are figured in the imperial edition of the Chow Li, or "Ritual of the Chow Dynasty" (1122-255 B. C.), the pictures dating from the time of Chu Hi,¹ by whom they were added to the text in the Twelfth Century, A. D. Among them is the *ún kwai* (fig. 125 A), the *sun kwai* (fig. 125 B), and the *kung kwai* (fig. 125 C).

The first, the "pillar scepter" or tablet, was $\frac{9}{10}$ foot in length and carried by princes of the first rank (dukes). They were the grand

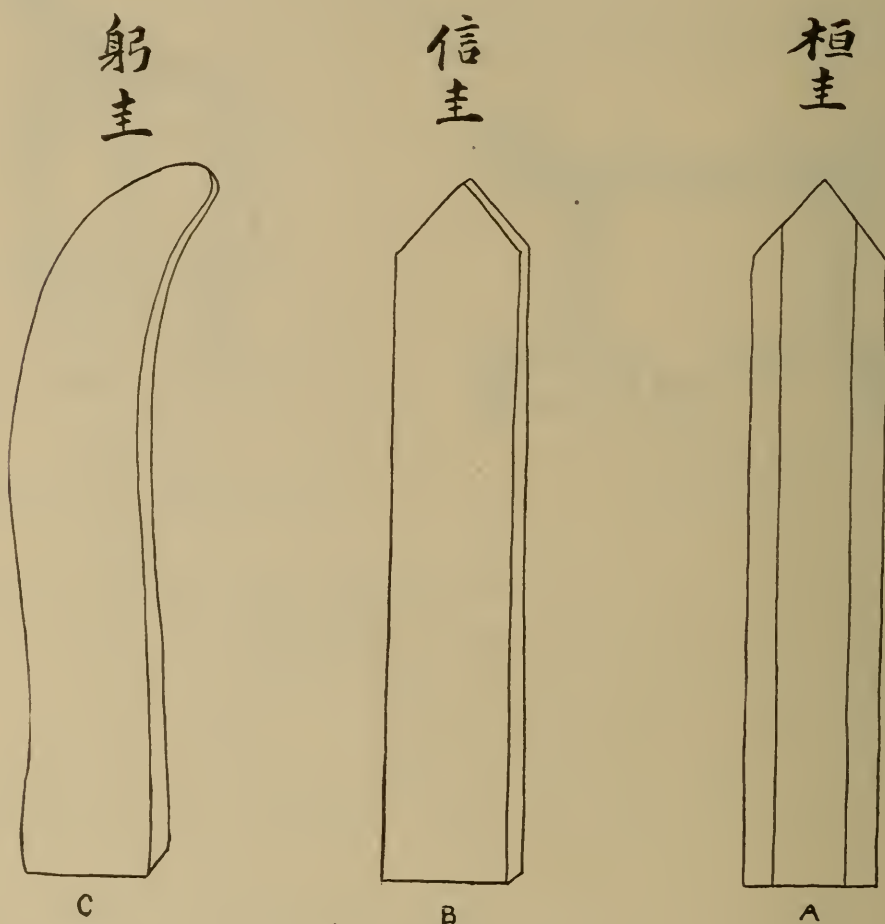


Fig. 125.

SCEPTERS (*kwai*) ANCIENTLY CARRIED BY CHINESE NOBLES.

From the Chow Li.

councillors of the Emperor and the descendants of the first two emperors. The two pillars or columns were the emblems of the palace, supporting it in the same manner as the princes support the Emperor. Perhaps the name, *ún kwai*, indicates that these tablets had two columns.² The second, the "straight scepter," was $\frac{7}{10}$ foot in length and carried by princes of the second rank (marquises). It probably represents the

¹ Chinese Reader's Manual, No. 79.

² Le Tcheou-li ou rites des Tcheou. Traduit par Édouard Biot, Paris, 1851, I, p. 431, note 7.

figure of a man standing erect.¹ The third, the "bent scepter," was also $1\frac{7}{10}$ foot in length and was carried by princes of the third rank (earls). It is explained as probably representing the figure of a man bending over.¹ The Emperor himself had a jade scepter, *tái kwai* (fig. 126), "grand tablet," so called from its size, it being 3 feet in length.

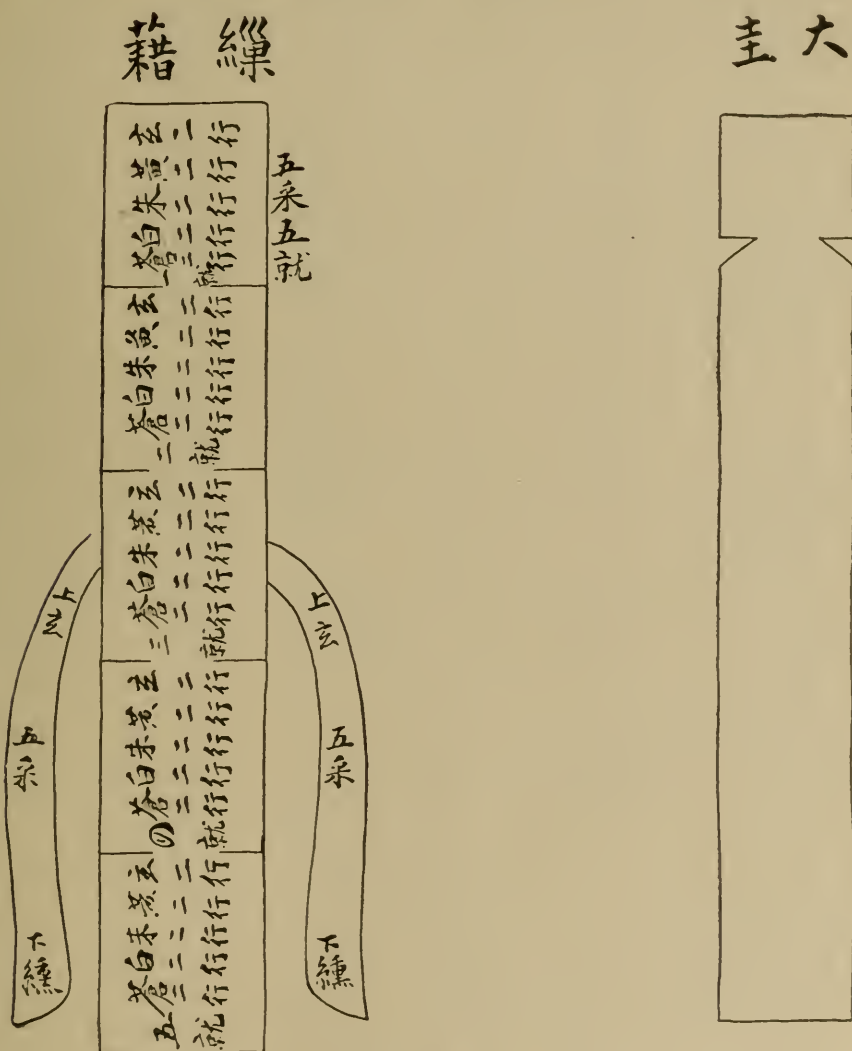


Fig. 126.

GRAND SCEPTER (*Tái kwai*) ANCIENTLY CARRIED BY THE EMPEROR.

China.

From the Chow Li.

It became smaller at the top and its head is in the shape of a hammer. This the Emperor wore between his robe and his girdle.²

In addition he held another scepter called the *chan kwai* or scepter of omnipotence (fig. 127). It was $1\frac{2}{10}$ feet in length. The word *chan* not only signifies omnipotence, but is also the name given to the four protecting mountains of the frontiers. In the picture added by Chu

¹ Le Tcheou li ou rites des Tcheou. Traduit par Édouard Biot, Paris, 1851. I, p. 432, note 1

² Idem, II, p. 522.

Hi (fig. 127), one sees on the scepter of this name four masses of rock which represent the mountains.¹ From the explanation given by the commentator it would appear that the great scepter, *tái kwai*, was wrapped with cords of five colors.

The *kwai* are not to be confounded with the tablets called *fát* (Japanese, *shaku*),² which were used at audiences in former times, nor with the scepters, *ü í* (jü í; Japanese, *niyoi*) given in China at marriage and to friends for good luck, and carried in Japan by certain priests³ (fig. 130).

Among the Ainu, in Japan, the men use carved wooden staves to lift their mustache in drinking *saké*. These staves, which they call *ikonit*,⁴ are commonly known from their present use as "mustache-sticks." They are about 14 inches in length, flat on one side, and rounded upon the other, which is more or less elaborately carved.⁵

An examination of the twelve specimens in the U. S. National Museum (Plates 19-22) shows a general resemblance to the staves which are tossed in gaming. The flat reverses are nearly all scratched with what were scarcely discernible marks, represented in plates 20 and 22. The writer concludes that these "mustache-sticks" were once emblems of rank or authority.

The only existing objects of remote antiquity with which I am acquainted outside of America that might have been used as divinatory implements in the manner of the staves are a set of ivory rods, discovered by Prof. Flinders Petrie in Egypt, part of which are now in the Museum of Archæology of the University of Pennsylvania.

They constitute a portion of the find made by Professor Petrie in 1895

¹ Le Tcheou-li ou rites des Tcheou. Traduit par Édouard Biot, Paris, 1851, I, pp. 431, 484.

²Of the specimens illustrated fig. 128 represents a Chinese tablet scepter in the University Museum. It forms an accessory of a Chinese theatrical costume of a noble of the imperial court and is made of wood, painted brown and varnished, instead of ivory. This scepter is slightly bent, 20 inches in length, about $\frac{1}{4}$ inch thick, and tapers from 2 inches wide at the base to $1\frac{3}{8}$ inch at the top. The *shaku* (fig. 129) is from a tracing of one in the U. S. National Museum, held in the hand of the statue of the Baron Li, said to have been one actually used by that illustrious man.

³The *ü í*, literally "as you wish," is of Buddhistic origin, and is one of the *Sapta ratna* or "Seven precious things," which constitute the insignia of a Tchakravartti. In Japan it is carried by the chief priests of the Zen sect, and is used by them to administer a blow to the catechumen when he fails to answer correctly. Its origin presents an interesting problem, its form suggesting that of the throwing-stick. The *fát* or *shaku* are wooden tablets, said to have been originally used for noting memoranda.

⁴J. M. Dixon, The Tsuishikari Ainos, Trans. Asiatic Soc., Japan, XI, Pt. 1, p. 47.

⁵The Japanese call them *hige-age*, "beard raisers." In "A Glance at Three Countries" (*Sangoku Tsuran Zusetsu*), Tokyo, 1785, the author, Rin Shihei, illustrates a mustache-stick, which he describes under this name, stating that they are used by the Ainu for the purpose mentioned.

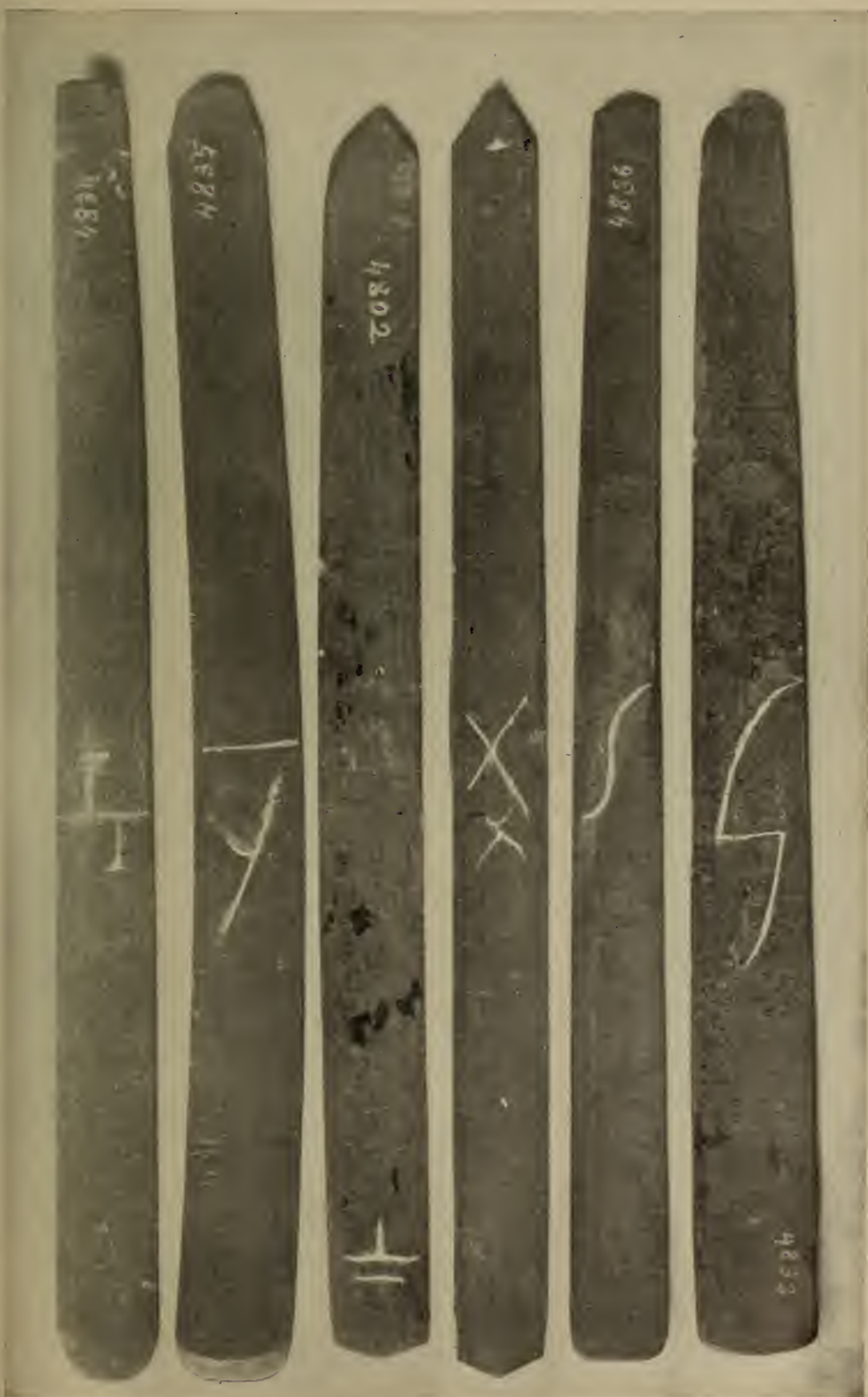


MUSTACHE STICKS.

Length, $12\frac{1}{2}$ to $13\frac{1}{2}$ inches.

Ainu of Yezo, Japan.

Cat. Nos. 150697, 150698, 150695, 22261, 150699, 150696, U.S.N.M.



MUSTACHE STICKS.
(Reverse.)

Ainu of Yezo, Japan.

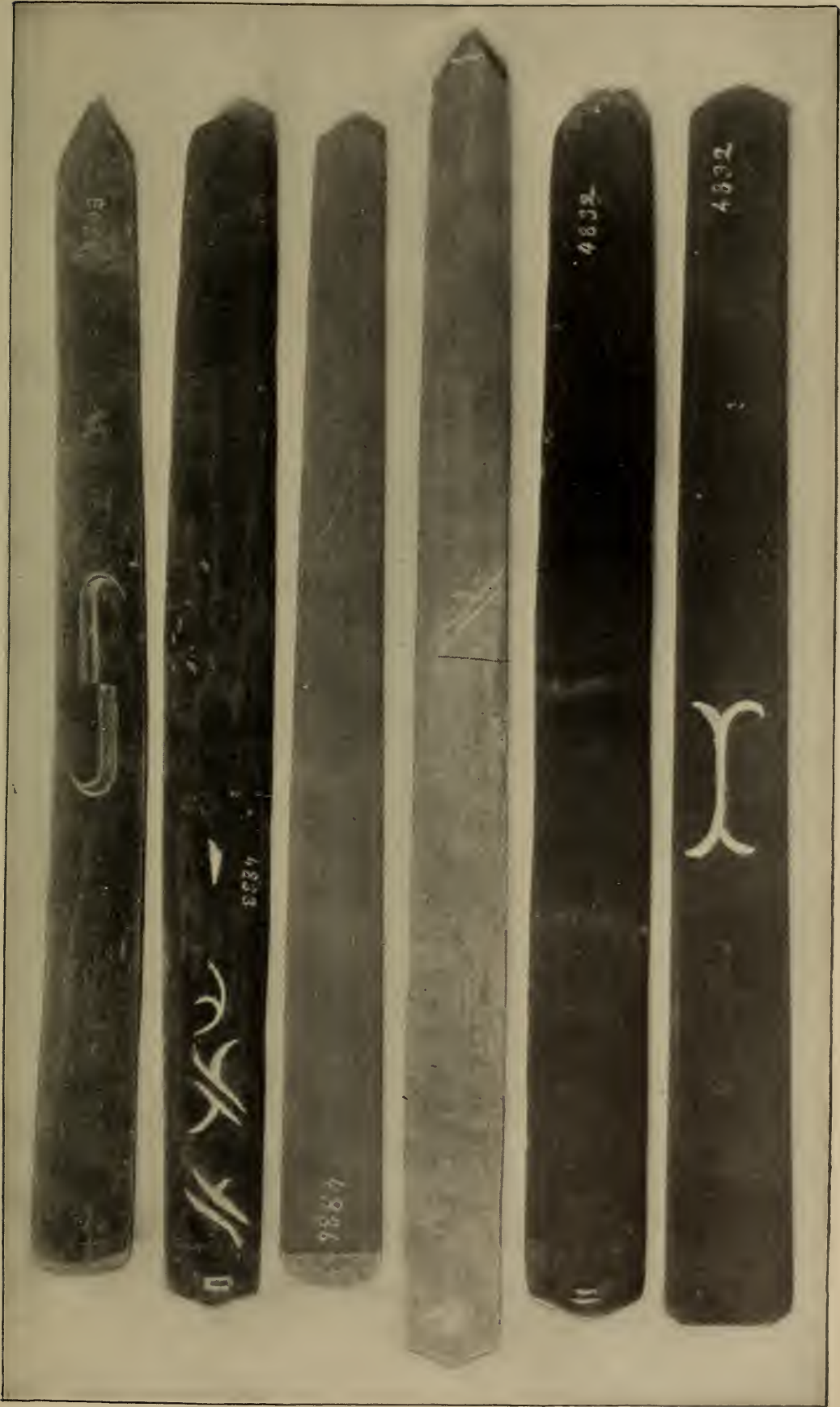


MUSTACHE STICKS.

Length, 12 to 14 inches.

Ainu of Yezo, Japan.

Cat. Nos. 150696, 4833, 150699, 22261, 150695, U.S.N.M.



MUSTACHE STICKS.
(Reverse.)

Ainu of Yezo, Japan.

鎮圭

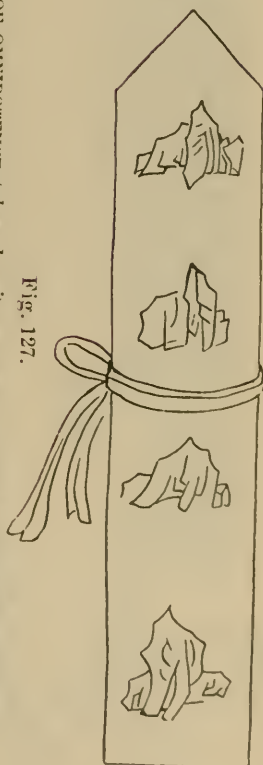


Fig. 127.

SCEPTER OF OMNIPOTENCE (*chan kwei*) ANCIENTLY CARRIED BY THE EMPEROR.

China.

From the Chow Li.

笏



Fig. 128.

WOODEN SCEPTER (*fat*) USED BY NOBLES IN CHINESE THEATER.

Length, 20 inches.

Museum of Archaeology, University of Pennsylvania.

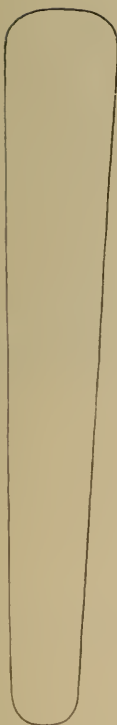


Fig. 129.

BATON OF AUTHORITY (*shaku*) CARRIED BY NOBLES.

Length, 16½ inches.

Japan.

Cat. No. 18556, U. S. N. M.

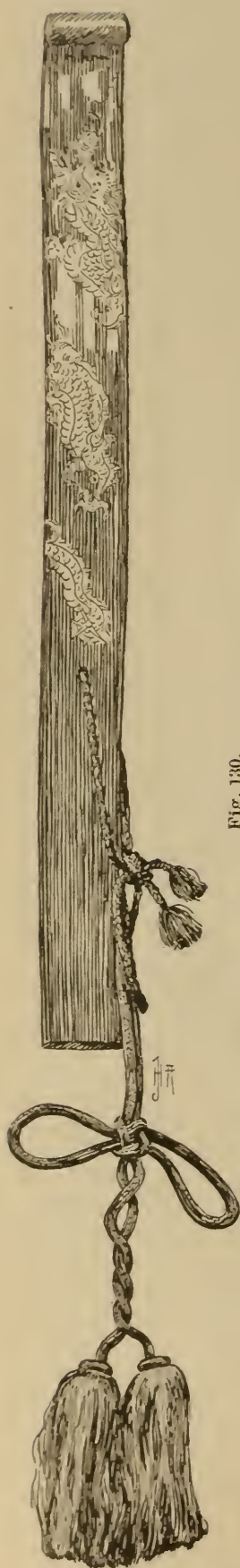


Fig. 130.

BATON (*nūyoi*) OF RED LACQUERED WOOD WITH PURPLE CORD, USED BY PRIEST OF ZEN SECT.

Length, 20½ inches.

Japan.

Cat. No. 19422, Museum of Archaeology, University of Pennsylvania.

between Ballas and Nagada, about 30 miles below Thebes, and attributed by him to a new race, probably Lybian, to whom he assigned a date about 3000 B. C. These rods or staves comprise part of a series from one tomb, "possibly a game," of which he gives the following list:

Twelve ivory rods, fig. 131.

Five ivory rods with incised diagonal lines, fig. 132.

Four figures of lions and one figure of hare, fig. 133.

Seventeen blocks, of which thirteen are bone, two limestone, and two alabaster.

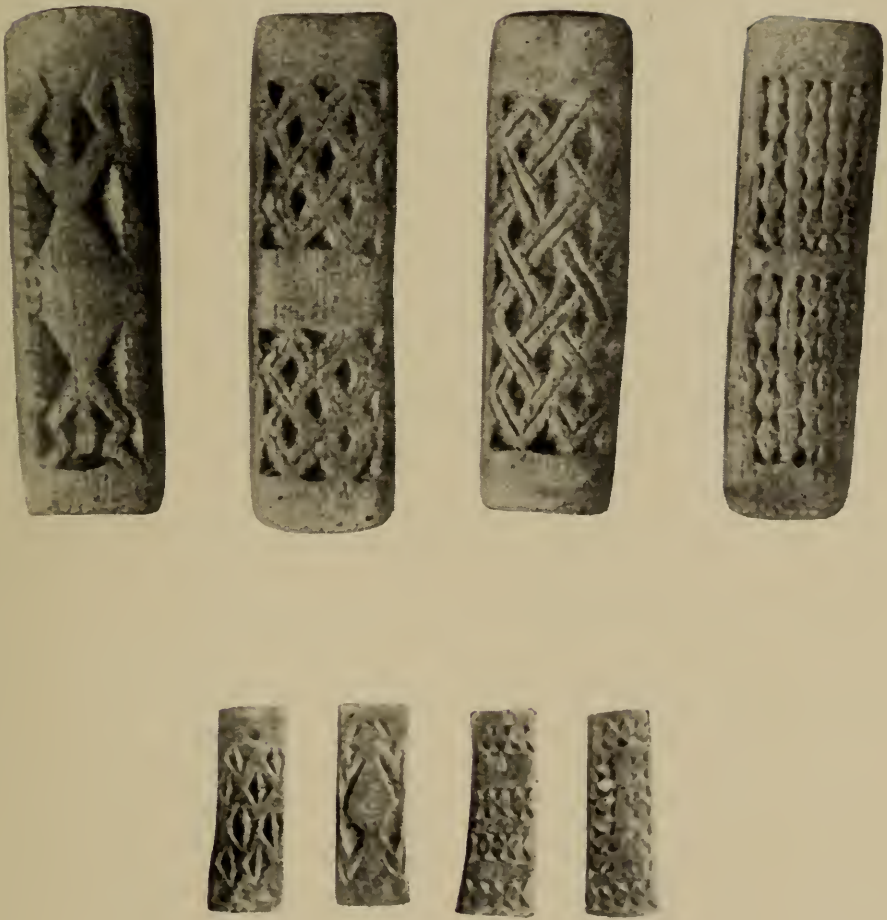
Thirty balls, natural iron concretions.

The twelve ivory rods, possibly intended for counting, are very perfect copies of jointed canes or straws. Four of the five rods with diagonal lines incised are in the University Museum. They are plain on one side, while the other is marked as shown in fig. 132, two having lines in diagonal bands of fours, and two a peculiar mark in the middle, which may have been intended to represent a feminine symbol. I have been unable to learn that any representation of such a game has been identified upon the monuments.

In Africa, Bent¹ gives the following account of the use of the four staves in divination:

From many of the huts at Inyamanda were hanging their *dollasses*—wooden charms—on which are drawn strange figures (Plate 23). Each family possesses a set of four, tied together by a string. Of these four one always has a curious conventional form of a lizard carved on it; others have battle-axes, diamond patterns, etc., invariably repeating themselves, and the purport of which I was never able to ascertain. They are common among all the Abantu races, and closely bound up with their occult belief in witchcraft. They are chiefly made of wood, but sometimes neat little ones of bone are found, a set of which I afterwards obtained. On the evening of the new moon the village witch doctor will go

¹The Ruined Cities of Mashonaland, p. 37.



WOODEN AND BONE DOLLASSES (Divining staves).
From drawing in Bent's Ruined Cities of Mashonaland.

round, tossing each man a set of *dollasses* in the air, and by the way they turn up he will divine the fortune of the individual for the month that is to come.¹

In F. Ratzel's *History of Mankind*² a picture is given of the dice and amulets of a Bamangwato magician in the Ethnographical Museum at Munich (I, p. 85), and again (II, p. 355) of a Kaffir witch doctor's apparatus (amulets, dice, etc.) similar to the preceding in the Museum of the Berlin Mission.



Fig. 131.

IVORY COUNTER FOR GAME (?).

Length, 5½ inches.

Lybian (?). Egypt.

Cat. No. E. S. 1119, Museum of Archaeology, University of Pennsylvania.

Dr. A. Donaldson Smith informs me that he saw a game played with staves throughout Somaliland and by the Sheik Hussein tribe among the Arusa Gallas.

¹Speaking of the natives of the Zambezi, the Livingstones (David and Charles Livingstone, *Narrative of an Expedition to the Zambezi*, London, 1865, p. 51) say:

The dice doctor or diviner is an important member of the community being consulted by Portuguese and natives alike. Part of his business is that of a detective, it being his duty to discover thieves. When goods are stolen he goes and looks at the place, casts his dice, and waits for a few days, and then, for a consideration, tells who is the thief.

Referring to the Guinea negroes, Bosman (William Bosman, *A New and Accurate Description of the Coast of Guinea*, translated in Pinkerton's *Voyages*, London, 1814, XVI, p. 399) says:

The second way of consulting their idols is by a sort of wild nuts, which they pretend to take up by guess and let fall again, after which they tell them, and form their predictions from the numbers falling even or odd.

Specimens of pierced cowrie shells used in fortune-telling from the Liberian exhibit at the Columbian Exposition are shown in fig. 134. These objects are now in the Philadelphia Commercial Museum.

The negroes of the French West Indies, according to Labat (*Nouveau Voyage aux Isles de l'Amerique*, Paris, 1724, IV, p. 153), play a game with cowries. He says: The game which they play in their country, and which they have also carried to the islands, is a sort of game of dice. It is composed of four *bouges* or shells, which are used by them as money. They have a hole purposely made in the convex side, so that they will stand as easily on one side as on the other. They shake them up in their hand as one shakes dice and throw them on a table. If all the sides with holes in them fall uppermost, or the opposite sides of two fall in the same manner and two in the opposite way, the player wins; but if the number of the holes is odd, he loses.

In the Streets of Cairo at the Columbian Exposition was a family of Bishareen Soudanese, living near Assouan, on the Nile, whose head was a dervish belonging to a local order, who practiced soothsaying with cowries (Dr. Talcott Williams). This man threw several cowrie shells, and made his prediction from the manner in which they fell. The cowrie shells correspond with the staves referred to by Bent, and are possibly substitutes for staves, as the writer also infers may be the case with similar shells in the Hindu game of *Pachisi*, No. 38.

²Translated by A. J. Butler. London, 1896.

Mr. J. Edward Farnum tells me that among the natives of the Bosi River, about 150 miles from its mouth (19° south latitude, East Africa), the witch doctors throw crocodile scales in fortune telling. The objects used are the nuchal dermosseous plates, from behind the base of the skull. They are smoothed down and polished, and six or eight—always an even number—are thrown. To obtain a reply to a question demanding an answer of “yes” or “no,” the smooth side up will be considered

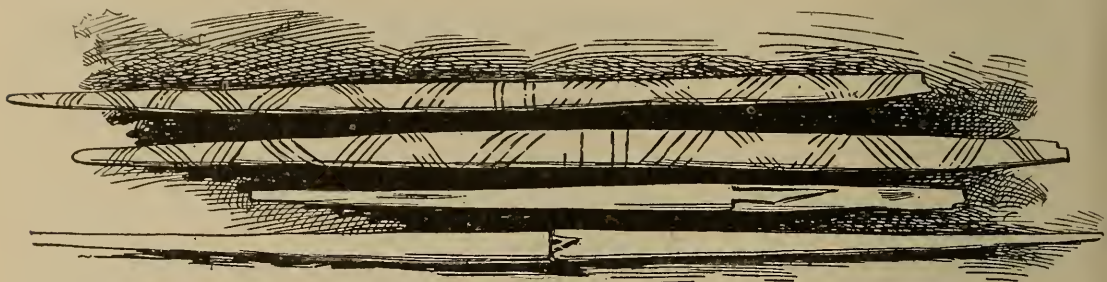


Fig. 132.

IVORY STAVES FOR GAME (?).

Length (perfect stave), $5\frac{3}{4}$ inches.

Lybian, Egypt.

Cat. Nos. E. S. 1129-1132, Museum of Archaeology, University of Pennsylvania.

as “no,” and the rough side “yes.” An answer is afforded by the manner in which the majority (which must be a considerable one) of the bones fall. The questions put to the witch doctor, who accompanied my informant, were usually about shooting. In reference to the animal to be shot, the doctor would name one side of the bones “masculine” and the other “feminine.” According to the answer, a male or female

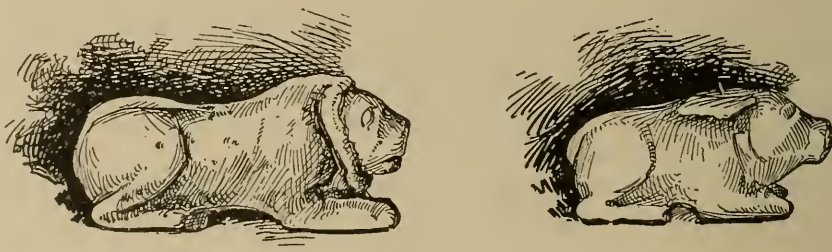


Fig. 133.

MEN FOR GAME (?) (LION, HARE).

Lengths, 1.37 inches, and 1 inch.

Lybian (?), Egypt.

Cat. Nos. E. S. 1145, 1147, Museum of Archaeology, University of Pennsylvania.

animal would be shot. Other determinations of a like character were made by the position of the bones, one to another, after falling.

H. A. Bryden¹ describes a Bushman divining for ostriches while on the hunt by means of three curious looking flat pieces of bone, triangular in shape and scored with a rude pattern.

He pulls them from the hide strip on which they are threaded, shakes them rapidly between his two palms, and casts them upon the earth.

¹ Longman's Magazine, CLXXVII, p. 231.

At the present day the Hottentot children cast lots by twigs—that is, if a thing is lost or a theft has been committed, they throw bits of stick and judge of the culprit, or of the direction wherein the lost property is to be found, by the arrangement of twigs, and among the Kaffirs bundles of sticks and assagais are employed by diviners in their rites for the discovery of crime.¹

Referring to the Melanesians, Codrington² says:

A game which belongs to the Banks Islands and New Hebrides is *tika*, the Fiji *tiqua*, played with reeds dashed in such a manner upon the ground that they rise in the air and fly to a considerable distance. In some islands, as Santa Maria, a string is used to give impetus, and in some the reed is thrown also from the foot. The game is played by two parties, who count pigs for the farthest casts, the number of pigs counted as gained depending on the number of knots in the winning *tika*. When two villages engage in a match, they sometimes come to blows. There are marks on the *tika* to show to whom they belonged. It is remarkable that in Mota a decimal set of numerals is used in this game, distinct from the quinary set used on every other occasion of counting.

In New Zealand, according to Taylor,³ the natives had a way of divination by means of sticks. This was called *Niu*.⁴ Each chief had a particular name for his own stick; thus, that of one chief was called *Te ata mounu*; that of another, *Te manu i te ra*; and that of a third, *Tongo hiti*. The person consulting the *Niu* went out in the morning before it was light, so that no one should have been

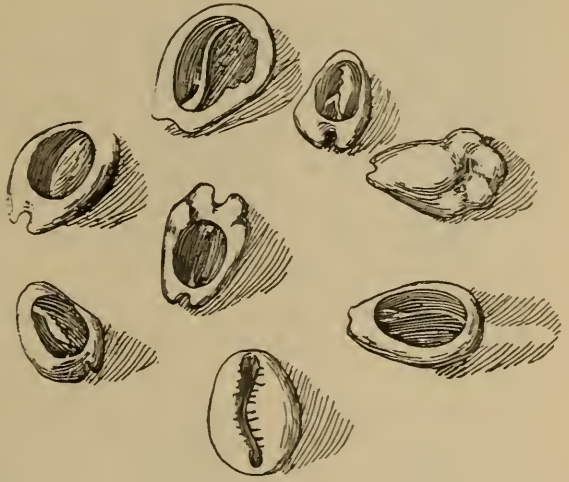


Fig. 134.

COWRIE SHELLS USED IN FORTUNE-TELLING.

Liberia, Africa.

Philadelphia Commercial Museum.

out before him, which would destroy the power of consultation, and taking his stick, a short, thin one made of the mahoe, in his right hand, and another representing the enemy in his left, he went and stuck another in the ground; this represented the *tapu*; and placing the two sticks together, one across the other, he uttered a *karakia*, and then threw them in front of a third stick, and it was according to their position that the consulter ascertained whether anyone was traveling on

¹ A. W. Buckland, *Rhabdomaney and Belomaney, or Divination by the Rod and by the Arrow*, Jour. Anthropol. Inst., V, p. 445.

² R. H. Codrington, *The Melanesians. Studies in their Anthropology and Folk-lore*, Oxford, 1891, p. 340.

³ Rev. Richard Taylor, *Te Ika a Mani, or New Zealand and its Inhabitants*, London, 1855, pp. 91, 92.

⁴ The name *niu* is a well-known Polynesian word for cocoanut, which was spun among the Polynesians for the purpose of divination. The New Zealanders, although they have no cocoanuts, retain the word as a name for other kinds of divination, especially that performed by sticks. (Dr. E. B. Tylor, *Primitive Culture*, p. 83.)

the road, whether they are friends or foes, and, if the latter, whether they would be conquered or not.¹

Different tribes had different ways of consulting the *Niu*, but the practice was general throughout the land. A spirit called *Korohaha Tu* was supposed to reside in the stick.²

This manner of divination finds an almost exact parallel in that described by Marco Polo as being resorted to by Chinghis Kaan.³

So when the two great hosts were pitched on the plains of Tanduc as you have heard, Chinghis Kaan one day summoned before him his astrologers, both Christians and Saracens, and desired them to let him know which of the two hosts would gain the battle—his own or Prester John's. The Saracens tried to ascertain, but were unable to give a true answer; the Christians, however, did give a true answer, and showed manifestly beforehand how the event should be. For they got a cane and split it lengthwise, and laid one-half on this side and one-half on that, allowing no one to touch the pieces. And one piece of cane they called *Chinghis Kaan* and the other piece they called *Prester John*. And then they said to Chinghis: 'Now mark; and you will see the event of the battle, and who shall have the best of it; for whose cane soever shall get above the other, to him the victory shall be.' Then the Christian astrologers read a Psalm out of the Psalter, and went through other incantations. And lo! whilst all were beholding, the cane that bore the name of Chinghis Kaan, without being touched by anybody, advanced to the other that bore the name of Prester John and got on top of it.

Colonel Yule has collected a number of references to similar divinatory processes, of which the following appear to belong to the same class:

The words of Hosea (IV, 12), 'My people ask counsel at their stocks and their staff declareth unto them,' are thus explained by Theophylactus: 'They stuck up a couple of sticks, whilst murmuring certain charms and incantations; the sticks then, by the operation of devils, direct or indirect, would fall over, and the direction of their fall was noted,' etc. Rubruquis seems to have witnessed nearly the same process that Polo describes. Visiting Lady Kuktai, a Christian queen of Mangu Kaan, who was ill, he says: 'The Nestorians were repeating certain verses, I know not what (they said it was part of a Psalm), over two twigs which were brought into contact in the hands of two men. The monk stood during the operation.' Petis de la Croix quotes from Thévenot's travels a similar mode of divination as much used, before a fight, among the Barbary corsairs. Two men sit on the deck facing one another, and each holding two arrows by the points, and hitching the notches of each pair of arrows into the other pair. Then the ship's writer reads a certain Arabic formula, and it is pretended that, whilst this goes on the two sets of arrows, of which one represents the Turks and the other the Christians, struggle together in spite of the resistance of the holders, and finally one rises over the

¹ If the stick representing his tribe fell above the other, it was a favorable sign; if below, a bad one.

² The following parallel custom exists among the Tsuishikari Ainu, as described to J. M. Dixon in the work cited: "A man in the tribe, desirous to know the will of the Deity regarding a certain matter, called in the aid of the *tusuguru* (magician-doctor). He came at night with two fresh willow (*susu*) wands, stripped of the bark, which he placed on a mat by the hearth. Then he called upon the *unjika-mui* (Fire-god) to declare his will. Soon the footsteps of the god were heard; they came up to the side of the *tusuguru*; the wands showed signs of restlessness and struck the mat on which they were placed. Two raps signified permission; a scraping or rubbing was an unfavorable augury."

³ Colonel Henry Yule, *The Book of Ser Marco Polo*, London, 1871, I, p. 213.

other. P. Della Valle (II. 865-866) describes the same process, conducted by a Moham-medan conjuror of Aleppo: 'By his incantations he made the four points of the arrows come together without any movement of the holders, and by the way the points spontaneously placed themselves, obtained answers to interrogatories.' And Mr. Jaeshke writes from Lahaul: 'There are many different ways of divination practiced among the Buddhists: and that also mentioned by Marco Polo is known to our Lama, but in a slightly different way, making use of *two arrows*, instead of a cane split up, wherefore this kind is called *da-mo* (arrow divination).' Indeed, the practice is not extinct in India, for in 1833 Mr. Vigne (I, 46) witnessed its application to detect the robber of a government chest at Lodiana.

It will be observed that in three of the examples the sticks or twigs are replaced by arrows.



Fig. 135.

PEBBLES FROM MAS D'AZIL.

In concluding this examination, reference should be made to the suggestion by Col. Garrick Mallery¹ that the colored pebbles found in the grotto of Mas d'Azil, in the department of Ariège, France, were used in gaming.

Only one face of these pebbles bears a design (fig. 135). Colonel Mallery says:

To an observer familiar with the gambling games of the North American Indians, in which marked plum-stones and similar objects are employed, these stained flat pebbles at once suggest their use to suggest values in a game by the several designs and by the pebbles falling on the figured or on the unmarked side.²

¹ Tenth Annual Report of the Bureau of Ethnology, p. 549.

² Ed. Piëtte, Les galets coloriés du Mas-d'azil, L'Anthropologie, VII. No. 3.

6. SHING KÚN T'ò. "The Game of the Promotion of Officials." Canton, China.

Board¹ and Dice.² A celebrated Chinese game, best known through Dr. Hyde's account as "the Game of the Promotion of Mandarins," played by two or more persons upon a large paper diagram, upon which are printed the titles of the different officials under the Chinese Government. Four dice are thrown, and the players advance through the various grades according to their throws.³

This complicated game may be regarded as a modification of the *Nyout* circuit, the dice replacing the staves. Its line of descent is indicated by the corresponding Korean game, which follows.

7. TJYONG-KYENG-TO. The Game of Dignitaries. Korea.

(a) Wooden die.⁴

(b) Reproduction of native picture of players engaged at the game.⁵ (Plate 24.)

The Korean form of the Chinese game of *Shing kún t'ò*. A long five-sided wooden die (fig. 136), with its edges notched with strokes from

one to five, is employed, instead of cubical dice.

I regard the use of this die as older than that of cubical dice, and the die itself to have been derived from the four staves, such as are employed in *Nyout*. This implement furnishes a connecting link with the spinning die or teetotum (fig. 137), which, notched

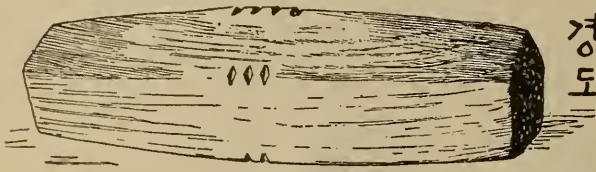


Fig. 136.

TJYONG-KYENG-TO.

Length, 4 inches.

Korea.

Cat. No. 175660, U.S.N.M.

중
용
경
도

like it, is also used in Korea in the same game.

The diagram for the game in the University Museum (Cat. No. 17626), is written in Chinese characters upon a sheet of white Korean paper $23\frac{1}{2}$ by $37\frac{1}{2}$ inches. This is divided by lines into one hundred and eight (9 by 12) rectangles, in each one of which is the title of a Korean official, with the indication beneath it for the next move, accordingly as the throw is from one up to five. Another Korean game (Cat. No. 17699) in the same museum, played in the same manner with the same kind of die upon a sheet of paper of the same size, is entitled *Nam-seung-to* (Chinese, *lám shing tò*), or "View-winning game." The sheet is divided by lines into one hundred and forty-four squares (9 by 16), within

¹ Cat. No. 169333, U.S.N.M. Gift of Stewart Culin.

² Cat. No. 152548, U.S.N.M.

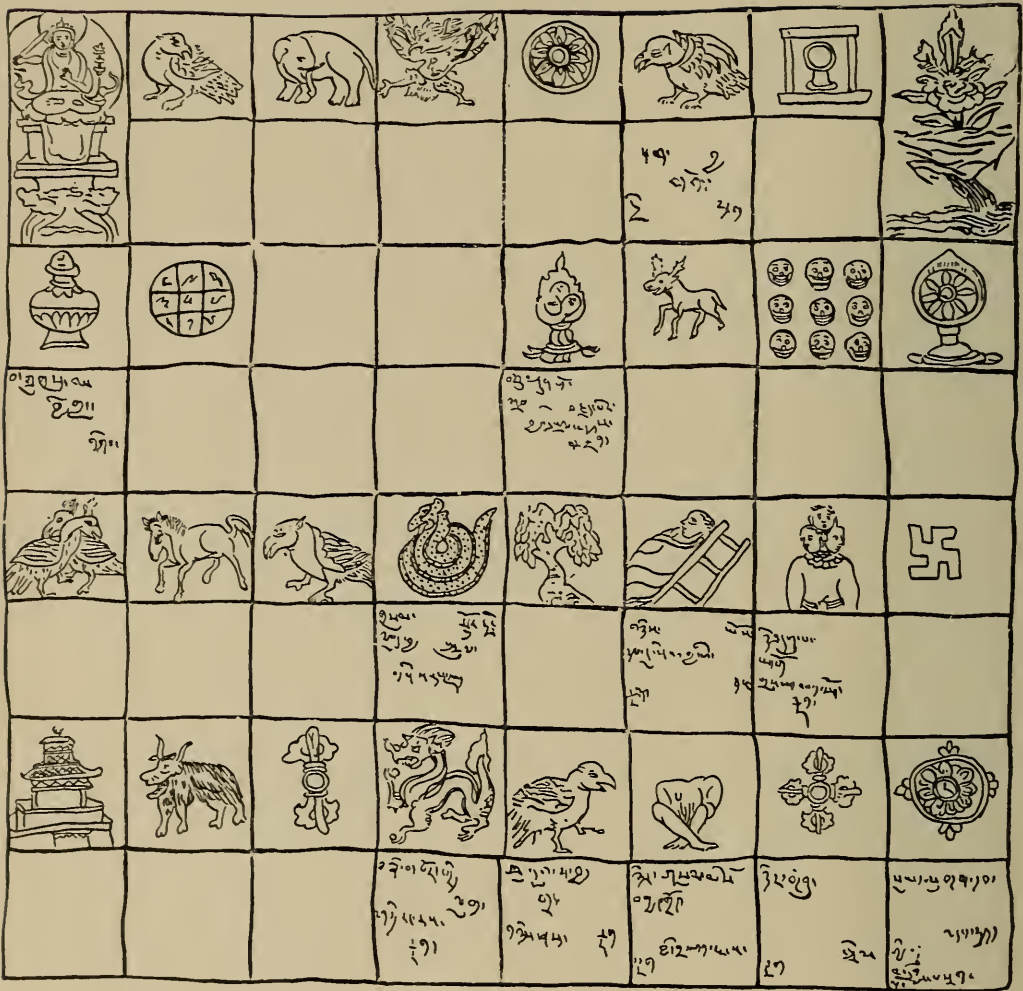
³ Described at length in Chinese Games with Dice and Dominoes, Report U. S. Nat. Mus., 1893, p. 504.

⁴ Cat. No. 175660, U.S.N.M. Gift of Stewart Culin.

⁵ Stewart Culin, Korean Games.



KOREANS PLAYING TJYONG-KYENG-TO.
From painting by native artist, reproduced in Korean Games.



DIVINATORY DIAGRAM.
Tibet.
After Schlagintweit.

which are written the names of places throughout Korea famous for beauty of scenery.¹ Still another Korean game (Cat. No. 17628) of this type in the University Museum is known as the "Monk's *tjyong-kyeng-to*," and is intended for the purpose of giving instruction in the religion of Buddhism. The sheet, which measures about 12 inches square, is inscribed with a diagram, the inner part of which is divided into one hundred and sixty-nine squares (13 by 13). These contain the names of the various conditions of existence, advancing from the lowest forms through the eighteen Brahmaloas, to the goal, which is Nirvana.

It is, in fact, a Buddhist game of Promotion. The moves are made according to the throws with three small wooden dice (fig. 138), each inscribed on its six sides with the magic formula: *Nám mò o ní t'ò fát* (*Namah Amitábha*). Under each name is written the place of the next move, according to the throw. The name at the top of the sheet is in Sanskrit characters, which are also written on seven of the squares, while the remainder of the text is in Chinese.²

An interesting parallel to this game is to be found in the French *Jeu Moral et Instructif*, the goal of which is Paradise.

This last described Korean game suggests a likely explanation of certain Tibetan divination tables figured by Schlagintweit.³

One of these (Plate 25) forms part of a great roll inscribed with other divinatory diagrams. It is divided into squares, of which those in the upper corners, left and right, bear, respectively, pictures of the Bodhisattva Manjusri, and the sword of wisdom, the emblem of his knowledge. Of the remaining sixty squares one-half are inscribed with religious emblems and the others, placed immediately beneath, with Tibetan words which in greater part were illegible. The assumption that the diagram is intended for a divinatory game, like the Korean Buddhist game above referred to, is supported by much corroborative evidence. Thus, on page 326 we find the following

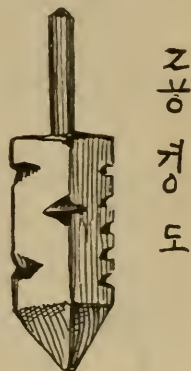


Fig. 137.

TJYONG-KYENG-TO.
Length, $1\frac{1}{2}$ inches.
Korea.

Cat. No. 17627, Museum of
Archæology, University
of Pennsylvania.

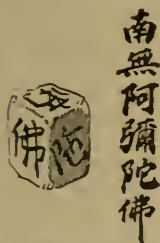


Fig. 138.

KOREAN DIE FOR
BUDDHIST GAME.

$\frac{1}{8}$ by $\frac{1}{8}$ by $\frac{1}{8}$ inch.

Cat. No. 17629, Museum
of Archæology, University
of Pennsylvania.

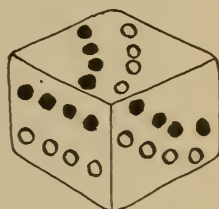


Fig. 139.

DIE USED WITH DIVINATORY DIAGRAM.

Tibet.

Reproduced from description by Schlagintweit.

Cat. No. 19423, Museum
of Archæology, University
of Pennsylvania.

¹ For which the Koreans have a passion, making excursions for the sake of the scenery to celebrated sites.

² That is, Chinese transcriptions and explanations of the Sanskrit names. A detailed account of the game is being prepared by the writer.

³ Buddhism in Tibet.

rules for using a simliar diagram, with the title. "Directions for finding out the due answers:"

1. "Begin to count the terrestrial fortress from the celestial king." (Manjusri).
3. "Count the water from the tiger."
4. "Count the earth from the tiger," etc.

Here we have the rules. The die according to which the count was made was doubtless the one (fig. 139) of which the faces are represented upon the same roll. The pictured squares contain devices of birds, animals, etc., labeled good, middling, or bad. The words beneath may indicate possibly the place of the next move, as in the Korean game.

8. CH'É MÉ. Teetotum.¹ China.

Prismatic die with six faces, marked so that the sum of each of the opposite faces equals seven, the spots being marked like Chinese dice, No. 19. Spun by means of a bamboo pin passing through the middle.

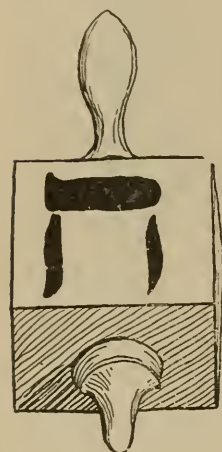


Fig. 140.

TEETOTUM (*würfel*)
USED BY JEWISH
CHILDREN AT PURIM.

Height, 2 inches.

Original in possession
of Dr. Herbert
Friedenwald.

This implement has its counterpart in the East Indian *chukree*, which is used in a similar game played on a diagram marked like six faces of a die. The *chukree* is said to be used only at the Divali Festival, which occurs in November, when gambling is permitted. A parallel is seen in the four-sided teetotum, which Jewish children in Germany and Russia play with during the eight days at Purim, or the Feast of Lots. This die (fig. 140) bears upon its sides the Hebrew letters: *shin*, *nun*, *he*, *gimel*. They are playfully regarded as standing for the German words *stell*, "put;" *nichts*, "nothing;" *halb*, "half;" *ganz*, "all." Prof. Leo Weiner informs me that the letters are intended for the phrase: *shām nēs hāyā gādōl*, "there wonder great has happened." Prof. Weiner writes:

The name of the *würfel* is *drēdl* (*draidle*), which is a diminutive of *dreher*, turner, twister. This latter word is used exclusively for the turning rattle of wood or metal used on the same holiday, as the children say, "to turn Haman," i. e., to drown him, or disgrace him in the noise. The manner of making is as follows: A block of wood, generally a round stick or part of a twig, is cut lengthwise into four parts; the inner edges are shaved off to admit the molten lead which thus forms the stem of the *drēdl*.

The form of the *drēdl*, with its letters on each face, is cut on the flat sides of each part; then the four parts are put together, after being tied with a cord and are placed in sand or into the ground, and the metal is poured into the mould.

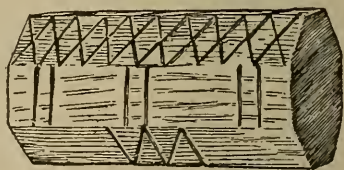


Fig. 141.

LONG LAWRENCE.

Length, 3 inches.

Almondbury, England.

Reproduction from description by
Mrs. Gomme.

From Korean games.

¹Cat. No. 169324, U.S.N.M. Gift of Stewart Culin. Chinese Games with Dice and Dominoes, fig. 3, Report U. S. Nat. Mus., 1893, p. 496.

9. LONG LAWRENCE.¹ Wooden die (fig. 141). Almondbury, England.

Reproduction from description given by Mrs. Gomme.² This die is described in Easter's Almondbury Glossary, quoted by Mrs. Gomme, under the name of *Lang Lawrence*, that is "Long Lawrence," as an instrument marked with signs, a sort of teetotum.

A "Long Lawrence" is about three inches long, something like a short ruler with eight sides: occasionally they have but four. On one side are ten X's or crosses, forming a kind of latticework; on the next to the left, three double cuts or strokes, passing straight across in the direction of the breadth; on the third a zig zag of three strokes one way and two or three the other, forming a W, with an additional stroke or triple V; on the fourth, three single bars, one at each end and one in the middle, as in No. 2, where they are doubled; then the four devices are repeated in the same order. The game, formerly popular at Christmas, can be played by any number of persons. Each has a bank of pins or other small matters.

A pool is formed; then in turn each rolls the "Long Lawrence." If No. 1 comes up the player cries "flush," and takes the pool; if No. 2, he puts down two pins; if No. 3, he says "lave all," and neither takes nor gives; if No. 4, he picks up one. The sides are considered to bear the names "Flush," "Put doan two," "Lave all," "Sam up one." It has been suggested that the name "Lawrence" may have arisen from the marks scored on the instrument, not unlike the bars of a gridiron on which the saint perished.

The Korean die used in *Tjyong-kyeng-to* suggests the probable origin of this instrument.

10. LOG.³ Long ivory die, with eight fluted sides marked with spots from one to eight (fig. 142). England or United States.

Used by gamblers in the latter country. The specimen exhibited is false, throwing high or low according to the direction in which it is held when rolled. Similar to the preceding.

11. RAMALA PÁSÁ. Dice for fortune-telling.⁴ India.

Reproductions of two varieties, both consisting of square wooden prisms,⁵ about 3 inches in length. One is a single die, marked on its four long sides with numerals from one to four; the other, a set of three dice, marked in the same manner with three, four, five, and six spots.

The custom of telling fortunes with dice is current throughout India, where it is practiced as a science under the name of *Ramala*,⁶ and has

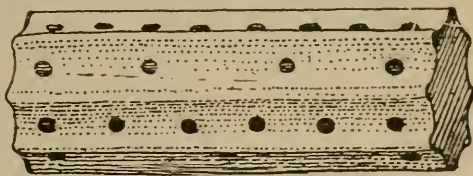


Fig. 142.

LOG. IVORY DIE.

Length, 2½ inches.

United States.

Cat. No. 7134, Museum of Archaeology, University of Pennsylvania.

¹ Cat. No. 175659, U.S.N.M. Gift of Stewart Culin.

² The Traditional Games of England, Ireland, and Scotland, London, 1894, I, p. 326.

³ Cat. No. 7134, Mus. Arch., Univ. Penn.

⁴ Cat. Nos. 9051, 9052, Mus. Arch., Univ. Penn.

⁵ The originals are of red sandalwood.

⁶ Derived from the Arabic *raml* (sand). Geomancy is known by the Arabs as *ilmu-l-raml*, or the science of sand. Upon this sand (for which paper is, however, sometimes substituted), they draw many unequal lines, upon which are disposed a certain number of points, from the combinations of which they pretend to foretell

an extensive literature. There are several different methods, in all of which the dice are used as implements of magic to determine number, reference then being had to the pages of a book numbered to correspond.¹ They agree in general with the Chinese methods of divination with arrow-staves. (See Nos. 65, 69.)

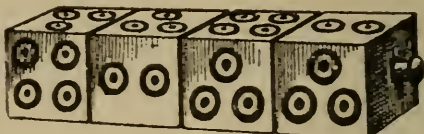
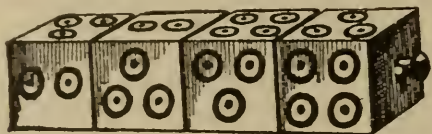


Fig. 143.

RAMALA PÁSÁ.

Length, $1\frac{1}{2}$ inches.

Lucknow, India.

From Proceedings Numismatic and Antiquarian Society of Philadelphia, 1891.

Cat. No. 9046, Museum of Archaeology, University of Pennsylvania.

12. RAMALA PÁSÁ. Dice for fortune-telling.² Lucknow, India.

Two sets each of four cubical ivory dice, marked on four sides with two, three, and four dots (fig. 143). A rod upon which they revolve passes through the center of the unmarked sides and binds them together.

A similar die in the writer's possession, obtained by Professor Hilprecht, through the courtesy of Rev. Albert S. Long, in Constantinople, is represented in fig. 144. The dice are strung upon an iron rod, with brass knobs at the ends.



Fig. 144.

DICE FOR FORTUNE-TELLING.

Length, $3\frac{1}{8}$ inches.

Constantinople, Turkey.

In the writer's possession.

They are of alloy, resembling copper, and are marked in the same manner as the Hindu set.

There are two sets, each of two pairs of four each, of similar metal dice from Persia in the Sommerville

collection (Cat. Nos. 283, 278) in the University Museum. The dice Cat. No. 283 are entirely of brass, while Cat. No. 278, which are smaller, comprise two brass dice with deep holes, set with small pieces of turquoise, placed in the middle, and two dice, with incised spots, one next to each knob. Cat. No. 283 is accompanied by an inscribed brass placque (fig. 145), $3\frac{1}{2}$ inches in diameter, with the twelve signs of the Zodiac in the outer circles and the seven stars (sun, moon, and five planets) in the inner,

future events. It is in great credit in the East, many elaborate treatises having been written on the subject. *Rammal*, a conjurer in the art of Geomancy. John Richardson. Persian, Arabic, and English Dictionary, London, 1806, art. *raml*. The invention of the science is commonly attributed to Edris (the prophet Enoch), and also to Daniel.

¹ An account of *Ramala* was given by the writer, East Indian Fortune-telling with Dice (Proc. Num. and Ant. Soc. of Phila., 1890-91, p. 65).

² Cat. No. 9046, Mus. Arch., Univ. Penn.

and Cat. No. 278 with an octagonal brass plaque (fig. 146), $3\frac{1}{8}$ inches in diameter, with six concentric and thirty-two radial divisions having the names of as many oriental cities in the outer row, of conditions of life and fortune in the next inner, and personal names in the third row.

13. PÁSÁ. Long dice.¹ Lucknow, India.

Square ivory prisms, about 2 inches in length, marked with one, two, six, and five spots in concentric circles. The one and six and two and



Fig. 145.

BRASS PLACQUE ACCOMPANYING DICE FOR FORTUNE-TELLING.

Diameter, $3\frac{1}{8}$ inches.

Persia.

Cat. No. 283. Sommerville collection. Museum of Archaeology, University of Pennsylvania.

five are opposite, and the two and five are red. Used in the game of *Chausar* (No. 40). A similar die was used in *Chaturanga* or "Dice Chess" (No. 45).²

¹Cat. No. 7133, Mus. Arch., Univ. Penn.

²On the Hradischt near Stradonitz in Bohemia, which is referred to *La Tène* period, several hundred longish stick-dice, marked with concentric circles (dice eyes), were found (fig. 147). Of the four longer faces, two opposite ones are broader than the two others. The ends are plain, while the long sides are marked three, four, five, six, so that the broader faces have three, four, and the narrower ones five, six. (Osborne in *Mitteil. des Anthropol. Ges.*, Wien, X, p. 255, quoted from *Ethnographische Parallelen und Vergleiche*, Richard Andree, Leipzig, 1889, II, p. 104). In commenting upon the above find, Osborne states that in North German, Holstein, and Danish finds these stick-dice also appear. These latter are similar to those of Hradischt, but are to be distinguished from them, however, by the markings, as they mostly only have the spots on the three long sides (with the numbers three, four, and six), leaving the fourth side unmarked. He continues that, after numerous inquiries (in Germany, Holstein, Denmark, and Switzerland), if at any other place entirely similar dice to those found in the Hradischt had been discovered, he received

I regard these long dice as the more or less direct outcome of the divining staves.

14. ASTRAGALI (TALI). Knuckle bones.¹ Natural bones from the ankle of a sheep.

Used as dice by the Greeks and Romans, and in common use at the present day for the same purpose in the Mohammedan East and in Southern Europe and Spanish America.

Knuckle bones have been used as implements in games from remote antiquity. There are several distinct ways in which they are thus employed. One was as jackstones, described by classical authors as



Fig. 146.

BRASS PLACQUE ACCOMPANYING DICE FOR FORTUNE-TELLING.

Diameter, $3\frac{1}{8}$ inches.

Persia.

Cat. No. 278, Museum of Archaeology, University of Pennsylvania. Sommerville collection.

played principally by women and children with five bones, the same number employed in modern times.² Among the Syrians at the present day they are used by children in games resembling marbles, being knocked from a ring drawn on the ground with others, which are sometimes weighted with lead.³ A favorite and almost universal use of knuckle bones in games was as dice in games of chance. Among the

a negative answer, except from the museum at Biel (Canton Berne), in which are part of the materials of La Tène. This pile dwelling has furnished two stick-dice that entirely correspond with those from Hradischt.

¹ Cat. No. 152546, U.S.N.M. Gift of Stewart Culin.

² Used at the present day by French children under the name of *osselets*.

³ Stewart Culin, Syrian games with Knuckle-bones, *Pro. Num. and Ant. Soc. of Phila.*, 1890-91, p. 123.

Greeks and Romans numerical values were attributed to the four long sides, the two pointed ends not being counted. The two broad sides, respectively convex and concave, counted three and four, while of the narrow sides, the flat counted one and the indented six. The numbers two and five were wanting.¹

Several names, both Greek and Latin, are recorded for each of the throws.

Two persons played together at this game, using four bones, which they threw into the air, or emptied out of a dicebox (*fritillus*). The numbers on the four sides of the four bones admitted of thirty-five different combinations. The lowest throw of all was four aces, but the value of a throw was not in all cases the sum of the

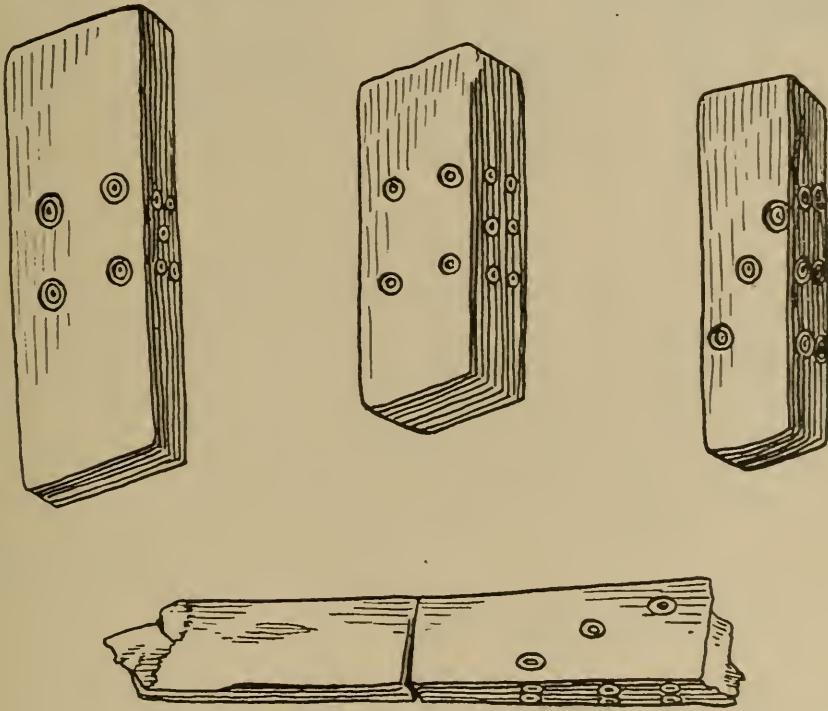


Fig. 147.

STICK-DICE.

Bohemia (Hradischt near Stradonitz).

After Osborne.

four numbers turned up. The highest in value was that called *Venus*, in which the numbers cast up were all different. Certain other throws were called by particular names, taken from gods, illustrious men and women, and heroes. These bones, marked and thrown as above described, were also used in divination.¹

Among the Turks, Arabs, Persians, the four throws with a single knuckle bone receive the names of the four ranks of human society. Thus, among the Persians, according to Dr. Hyde, they were called as follows:²

Supinum, *Dudz*, "thief."

Pronum, *Dihban*, "peasant."

Planum, *Vezir*.

Tortuosum, *Shah*.

¹ Smith's Dictionary of Greek and Roman Antiquities, Art. *Talus*.

² Thomas Hyde, *De Ludis Orientalibus*, Oxford, 1694, p. 147.

The Arabic name for the bones is *káb* (dual, *kábatain*, plural, *kabat*), meaning "ankle," referring to their source. Two bones are now commonly used—one from the right and the other from the left leg of a sheep.¹ I regard them as the direct ancestors of cubical dotted dice, the name of which in Arabic is the same as that of the bones. The dice used in Arabic countries are made in pairs (see No. 16), and the most popular and universal game is one with two dice, *kábatain*.

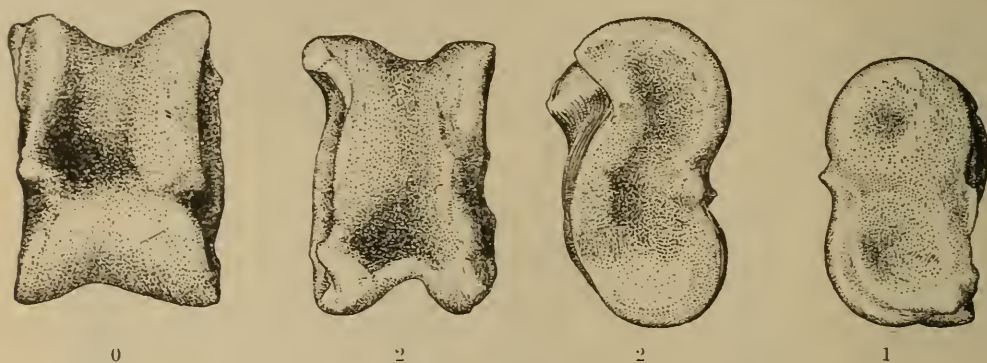


Fig. 148.

VALUES OF THE THROWS WITH KNUCKLE BONES.

Tarahumara Indians, Chihuahua, Mexico.

Games with knuckle bones are a favorite amusement in Spanish-American countries, and it is claimed that they existed among the Indians before the discovery. Dr. Carl Lumholtz found them among the Tarahumara,² who attribute numerical values to the different sides.

Among the Papago in Arizona Mr. W J McGee found a single knuckle bone of a bison, used in playing a game called *Tan-wan*, of which a specimen collected by him (fig. 149,) is exhibited in the U. S. National Museum (Cat. No. 174443).

¹ The favorite game among the Turkomans, according to Vámbéry (Arminius Vámbéry, *Sketches of Central Asia*, Philadelphia, 1868, p. 110), is the *Ashik* game (*ashik*, the ankle bones of sheep), which is played in the manner of European dice with the four ankle bones of a sheep, and with a degree of passionate excitement of which one can form no idea. The upper part of the bone is called *tara*, the lower *altchi*, and the two sides *yantarap*. The player takes these four little bones into the palm of his hand, throws them up and receives half the stake, if two *tara* or two *altchi*, and the whole of the stake, if all four *tara* or *altchi* turn up.

The advantage to be gained arises entirely from dexterity in throwing. Trickery is impossible, since the bones are frequently changed.

Dr. Karl Himly (*Die abtheilung der Spiele in Spiegel der mandschu-sprache*, T'oung Pao, VI, p. 355) gives the Manchu name of knuckle bone as *gačura*. It would appear from his account that several games were known corresponding to those described by the author as played by Syrian children. One, played by children, in which the bones were employed as jackstones; another in which they were used as dice, and a third flinging a knuckle bone at something or throwing at a knuckle bone set in the ground. The Chinese name of knuckle bone is *pü shik kwat* (pei si kn).

² They call the game *Tu wí tui wa la*. They play with two knuckle bones. The counts are shown in fig. 148. In addition to these counts, if a bone stands on its pointed end it counts six, and on the end opposite, twelve.

Twelve points constitute a game. The specimens collected by Dr. Lumholtz are in the American Museum of Natural History (Cat. No. 3055).

The game is played by two persons, who sit facing each other, 4 or 5 feet apart. The bone is twirled into the air out of the thumb and forefinger, the back of the hand being held upward. The position in which it falls on the ground controls the count in the game. So long as the player succeeds in throwing the pitted side, or "cow-hoof," as it is called, upward, he retains possession of the bone, and with each throw wins one bean from a prearranged number equally divided between the players. The sides do not count in the play, and the thrower may play again and again without forfeiting the bone until he throws the flat side (opposite the "cow-hoof") upward, when the bone goes to his opponent to throw, with the same conditions. The winning of the entire number of an opponent's counters constitutes a game won.

In Costa Rica, Dr. T. M. Calnek informs me that the Indians in the vicinity of San José continually play with the astragalus of an ox or cow, using a single bone. They call the game by the name of *Choque suelo*.

They are also used by the Indians in Peru. Their Quichua name, *tava*, would appear to be derived from the Spanish *taba*, but this is contrary to the opinion entertained by my informant, Dr. Emilio Montez,¹ who exhibited a prehistoric copy of a knuckle bone in terra cotta, from Cuzco, in his collection at the Columbian Exposition.²

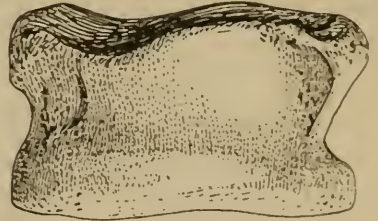


Fig. 149.

ASTRAGALUS OF BISON USED AS DIE.
Papago Indians, Pima County,
Arizona.

Cat. No. 17443, U.S.N.M.



Fig. 150.

ASTRAGALUS USED IN GAME.

Lengua Indians.

Cat. No. 1797, Field Columbian Museum. Hassler collection.

There are nine astragalus bones from the Lengua tribe, Chaco Indians, in the Hassler collections from Paraguay, in the Field Columbian Museum. Prof. William H. Holmes, who courteously furnished me with the accompanying drawing (fig. 150), informed me that all but one bear scratched lines, as represented.

Knuckle bones of various animals, some worked and showing wear, have been found associated with Indian remains in various parts of the United States. Mr. Clarence B. Moore found a fossil llama astragalus in a mound on Murphy Island, Putnam County, Florida, and a large fossil astragalus, not yet identified, in a mound on Ossabow Island,

¹ Dr. Montez tells me that of the four ways in which a knuckle bone may fall, two do not count, while one of the others wins and one loses.

² Cat. No. 340, Field Columbian Museum, Chicago. Montez collection.

Bryan County, Georgia. Mr. William W. Adams found knuckle bones in stone graves opened by him in Williamson County, Tennessee. Thirty or forty bones were found in perhaps a hundred graves. They were always found in pots. Children's graves contained smaller pots, and the bone was smaller, evidently from a small animal. Some were worn until nearly smooth on the side, and all showed polish as though they had been carried or used a long time. A number of specimens from mounds are contained in the U. S. National Museum, as Cat. No. 63047, astragalus of bison from a mound, Pecan Point, Mississippi County, Arkansas, and Cat. No. 63047a, astragalus of deer from same place, both collected by Mr. Edward Palmer. Three specimens (Cat. No. 61621) are from Lyons County, Kentucky; two others (Cat. No. 91145) catalogued from Arkansas, are respectively of deer and bison; another (Cat. No. 169518) is from Lepanto, Poinsett County, Arkansas. Some of these bones are squared, so as to have six instead of four sides, many are more or less cut down, and one is partly calcined. Mr. Cushing found a number of knuckle bones of deer, several showing high polish from long use, in the muck deposit explored by him at Marco, Florida.

In England knuckle bones were formerly used in games.¹ A single bone was tossed and the four sides received, according to Dr. Hyde, the following names:²

Supinum, "Put in."

Pronum, "Blank."

Planum, "Take half."

Tortuosum, "Take all."

These terms sufficiently explain the method of play.

¹ De Ludis Orientalibus, p. 142.

² Under the head of *Cockall*, Brand (Observation on Popular Antiquities, London, 1813, II, p. 288) gives the following account:

In the English translation of Levinus Lemnius, fol. London, 1658, p. 368, we read:

"The antients used to play *Cockall* or casting of huckle bones, which is done with smooth sheep bones. The Dutch call them *Pickelen*, wherewith our young maids that are not yet ripe use to play for a husband, and young married folks despise these as soon as they are married. But young men use to contend with another with a kind of a bone taken forth of ox-feet. The Dutch call them *Coten*, and they play with these at a set time of the year. Moreover *Cockals*, which the Dutch call *Teelings*, are different from dice, for they are square with four sides, and dice have six. *Cockals* are used by maids amongst us, and do no ways waste any one's estate. For either they pass away the time with them, or if they have time to be idle they play for some small matter, as for chestnuts, filberds, pins, buttons, and some such 'juncats.'

"In Langley's Abridgment of Polydor Vergile, fol. 1, we have another description of this game: 'There is a game that is played with the posterne bone in the hynder foote of a sheepe, oxe, gote, fallowe, or redde dere, whiche in Latin is called *Talus*. It hath foure chaunces, the ace point, that is named *Canis*, or *Canicula*, was one of the sides. He that cast it leyed doune a peny or so muche as the gamers were agreed on; the other side was called *Venus*, that signifieth seven. He that cast the chaunce won sixe and all that was layd doune for the castyng of *Canis*. The two other sides were called *Chius* and *Senio*. He that did throwe *Chius* wan three. And he that cast *Senio* gained four. This game (as I take it) is used of children in Northfolke, and

15. ASTRAGALI.¹ Glass, ancient.

Copies in glass of natural knuckle bones for use in games. Of very common occurrence among the remains of classical antiquity. Bronze *astragali* are found (fig. 151), and they are also recorded to have been made of ivory and agate.

16. KABATAIN. Dice.² Lucknow, India.

Cubes of ivory regularly marked—that is, the six and one, five and two, and four and three opposite, so that their sum is equal to seven.³ The spots are arranged so that the two dice are each the complement of the other. The “fours” are inscribed in red. The spots consist of small circles with an interior dot, the customary manner of marking Indian dice, which agrees in this respect with those of ancient Rome.

17. KUBOS. Die.⁴ Ancient Greek. Naukratis, Egypt, about 600 B. C.

An irregular cube with rounded sides about an inch square. The material is limestone, with drilled holes for pips. Found by Prof. W. M. Flinders Petrie in 1885.⁵

It is said that no traces of cubical dotted dice have been discovered in Egypt in the purely Egyptian period, but they occur in the Delta from the time of Psammetichus I (about 670 B. C.). They are regarded by scholars as a foreign introduction.

In the British museum there are two dice of glazed baked clay from Assyria, found with tablets of Assurbanipal (668–623 B. C.) at Kouyunjik.

As the glaze of the dice is unlike that of Assyrian pottery, and from the fact that the mounds at Ninevah were occupied by a Parthian village about 200 B. C., Mr. Pinches concluded that the dice proba-



Fig. 151.

BRONZE ASTRAGALUS.

Length, $1\frac{1}{8}$ inches.

Cat. No. 949, Sonnerville collection. Museum of Archaeology, University of Pennsylvania.

they call it the Chance Bone; they play with three or foure of those bones together; it is either the same or very lyke to it.”

In a note Braud states: “In The Sanctuarie of Salvation, etc., translated from the Latin of Levinus Lemnius by Henry Kinder, 8vo., Lond., pr. by H. Singleton, p. 144, we read these bones are called huckle-bones or coytes.”

¹Cat. No. 16488, Mus. Arch., Univ. Penn. Chinese Games with Dice and Dominoes, fig. 31, Report U. S. Nat. Mus., 1893, p. 536.

²Cat. No. 7145, Mus. Arch., Univ. Penn. Chinese Games with Dice and Dominoes, fig. 27, Report U. S. Nat. Mus., 1893, p. 534.

³Almost the invariable arrangement, the principal exceptions being the Etruscan and Korean dice. The only other known to the writer are the Hindu dice (Nos. 11, 12) used in fortune telling, and the dice employed in the Burmese game of dominoes (No. 24).

⁴Cat. No. 168983a, U.S.N.M., from original, Cat. No. 17575, Mus. of Arch., Univ. Penn. Chinese Games with Dice and Dominoes, fig. 28, Report U. S. Nat. Mus., 1893, p. 534.

⁵A somewhat similar die from Naukratis in the British Museum has leaden points projecting from the holes, as if the die had been left unfinished. The dots forming the three are arranged * * *, in the same manner as upon the above.

bly belonged to this or a later period. I am told by Dr. Morris Jastrow that no word for dice has yet been discovered in the cuneiform.

18. TESSERAE.¹ Dice, Ancient Roman or Etruscan. Purchased in Florence, Italy.

Cubes of bone,² about an inch square, regularly marked, the pips consisting of concentric circles. As is frequently the case with Roman dice, these dice are made of a hollow bone, the openings on two opposite sides being stopped with bone plugs. Several of the Roman dice in the University Museum are stained a greenish color with salts of copper.

Three *tesserae* or cubical dice were anciently employed, while four *tali* or knuckle bones were used. It is recorded, however, that as early as the time of Eustathius the modern practice of using two dice instead of three had been established.³

In order to prevent cheating, dice were cast into conical beakers (*pyrgus*, *turricula*), the interior of which was formed of different steps. A parallel to this is found in the Siamese backgammon, *Saka*, where the dice are thrown into the *krabok*.⁴

The classical games with dice, of which accounts have come down to us, were chiefly played in connection with a board or table (*abacus*, *tabula*, *alveus*, *alveolus*), on which pieces or men were moved according to the throws. These pieces were round or oval stones (*calculi*), or later, draftsmen (*latrunculi*), just, as with us, the same men are used for draughts and backgammon.

Professor Lanciani⁵ states that the one hundred and more gaming-tables (*tabulae lusoria*) found in Rome, mostly during his lifetime, belong to six different games of hazard. In some of them, the mere chance of dice-throwing was coupled with a certain amount of skill in moving the "men" or *tesserae*. Their outline is always the same. There are horizontal lines at equal distance, each line containing twelve signs, thirty-six in all. The signs vary in almost every table; there are circles, squares, vertical bars, leaves, letters, monograms, crosses, crescents, and immodest symbols; the majority of these tables (sixty-five)

¹ Casts No. 168983b, U.S.N.M., from originals Cat. No. 15781, Mus. Arch., Univ. Penn. Chinese Games with Dice and Dominoes, fig. 29, Report U. S. Nat. Mus., 1893, p. 535.

² A great variety of materials have been used for dice. Among seventy dice, exhibited in a case in the Greek and Roman section of the British Museum, the materials are divided as follows:

Bone or ivory....	32	Jet	2	Green stone.....	1	Marble	1
Bronze.....	11	Meteoric iron....	1	Gray stone.....	1	Amber	1
Agate	5	Pyrites	1	Black stone.....	1	Baked clay.....	1
Rock crystal ...	4	Copper	1	Quartz.....	1	Porcelain.....	1
Onyx.....	3	Lead.....	1	Alabaster.....	1		

A close-grained wood, especially privet, is recorded as having been employed for dice. (Smith's Dictionary of Greek and Roman Antiquities. Art. *Tessera*.)

³ *Idem*.

⁴ Chinese Games with Dice and Dominoes, fig. 9, Report U. S. Nat. Mus., 1893, p. 501.

⁵ Rudolfo Lanciani, Gambling and Cheating in Ancient Rome, The North American Review, July, 1892.

contain words arranged so as to make a full sentence with thirty-six letters. The rules of the games played upon these tables are as yet only conjectural.

The game of *Duodecim scripta*, "twelve lines," was substantially the same as our backgammon. It was played upon a board with twelve double lines, with fifteen white and fifteen black men; the throws were counted as we count them; the "blots" might be captured; the pieces (whether they started from home or not) had to be brought home, and the winner was he who first cleared off his men. The principal variation from the modern game lies in three dice being employed instead of two, agreeing in this respect with the game of *Pachisi* (No. 38). According to Heroditus¹ games with dice (including also knuckle-bones and ball) were invented by the Lydians as a diversion during a time of famine, that they might not feel the craving for food.

19. SHIK TSAI.² Dice. China.

Cubes of bone, regularly marked, but differing from those of India in having both the "ones" and "fours" marked in red; the "one" spots larger than the others, and in all the spots being simple round marks, without circumscribed circles. They are not made in pairs, and are usually sold in sets of six.

The Chinese play a great variety of dice-games, the principal one being with two dice, and known as *Chák t'ín kau*, "Throwing Heavens and Nines," from the names of the two highest throws. In this game the twenty-one throws that can be made with two dice receive different names, and are divided into two series or suites, called *man*, "civil," and *mò*, "military."

The eleven *Man* throws in the order of their rank are:

- "Double six," called *t'ín*, "Heaven."
- "Double one," called *tí*, "Earth."
- "Double four," called *yan*, "Man."
- "One, three," called *wo*, "Harmony."
- "Double five," called *múi*, "plum flower."
- "Double three," called *chéung sám*, "long threes."
- "Double two," called *pán tang*, "bench."
- "Five, six," called *fú t'au*, "tiger's head."
- "Four, six," called *hung t'au shap*, "red head ten."
- "One, six," called *kò kéuk ts'at*, "long leg seven."
- "One, five," called *hung ch'ui luk*, "red mallet six."

The ten *Mo* throws in the order of their rank are:

- "Five, four," and "six, three," called *kau*, "nines."
- "Five, three," and "six, two," called *pát*, "eights."
- "Five, two," and "four, three," called *ts'at*, "sevens."
- "Four, two," called *luk*, "six."
- "Three, two," and "four, one," called 'ng, "fives."
- "One, two," called *sám*, "three," or *sám kai*, "three final."

¹ Book 1, Chap. 94.

² Cat. No. 152548, U.S.N.M. Gift of Stewart Culin. Chinese Games with Dice and Dominoes, fig. 1, Report U. S. Nat. Mus., 1893, p. 492.

The antiquity of dice in China is not known. They appear to have been introduced into that country from India. It will be observed that a cosmical significance is attached to the dice throws, the "six" being called "Heaven," and its opposite, "one," "Earth." The "four" between is designated as "Man."¹

Korean dice, called *tjyou-sǎ-ǎ*, differ from those of China in having the 1 and 2, 3 and 4, and 5 and 6 opposite. A set in the University Museum, collected by Dr. E. B. Landis, are marked with plain black dots, arranged like the Hindu *kábatin*, to form a pair. A single Korean die (fig. 152), in the same museum, is a rectangular prism, flat instead of square. The arrangement of the dots is the same, but the "one" and the "four" is in red, as well as the two middle spots of the "six" and the middle spot of the "five" and of the "three."

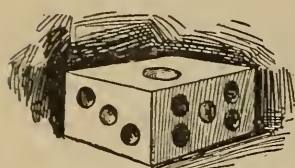


Fig. 152.

KOREAN DIE.

Cat. No. 17606, Museum of Archaeology,
University of Pennsylvania.

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ㄤ
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It is interesting to note that the arrangement of the dots on the Korean dice is the same as that on some of the Etruscan dice.² A peculiar importance is attached to the latter, from the fact that it is believed by Etruscologists that the first six numerals of the Etruscan language have been recovered from a pair of dice exhumed in 1848 near Toscanella.³ These dice, now in the Cabinet of Medals and Antiques in the National Library, Paris, bear, instead of the

usual pips or dots, the following words in Etruscan letters: Mach, Thu, Huth, Ki, Zal, Sa. These words have been variously interpreted by scholars upon the assumption that they are numerals, and also that the pips which they are supposed to replace were uniformly arranged 1 + 3, 2 + 4, 5 + 6 (Campanari's law). Comparison of the Etruscan dice words with the numerals used in the Korean game of *Nyout*, a comparison suggested by the fact of the agreement of the Korean and Etruscan dice in their dissimilarity from other dice, shows a curious correspondence.

Korean stave-game numerals:	Etruscan dice names:
1. <i>To</i> or <i>ta</i> .	<i>Thu</i> .
2. <i>Kǎi</i> or <i>Ká</i> .	<i>Ki</i> .
3. <i>Kel</i> or <i>Kol</i> .	<i>Zal</i> .
4. <i>Nyout</i> or <i>ute</i> .	<i>Huth</i> .
5. <i>Mo</i> .	<i>Mach</i> .
6.	<i>Sa</i> .

¹ Chinese Games with Dice and Dominoes, Report U. S. Nat. Mus., 1893, p. 494.

² Among the dice in the British Museum regarded as Etruscan, which vary in their pips from the regular arrangement (that is, 1 + 6, 2 + 5, 3 + 4), three have 1 + 2, 3 + 4, 5 + 6, and three 1 + 3, 2 + 4, 5 + 6. What appears to be a set of three dice, made of amber, have one marked 1 + 2, 3 + 4, 5 + 6; one 1 + 3, 2 + 4, 5 + 6, and one regular, 1 + 6, 2 + 5, 3 + 4. Two iron dice (Cat. No. 15786) in the University Museum, purchased at Perugia, have their dots arranged 1 + 3, 2 + 4, 5 + 6.

³ Daniel G. Brinton, The Ethnologic Affinities of the Ancient Etruscans, Proc. Amer. Philos. Soc., Philadelphia, XXVI, 1887, p. 522.

From the fact of the *nyout* numerals being in all probability derived from an Ural-Altaic stock, their correspondence with the dice words would seem to support Canon Isaac Taylor's¹ theory of the Ugric origin of the Etruscans. It should be observed, however, that if the words stand for numerals they are not paired² in either of the ways (1 + 3, 2 + 4, 5 + 6, or 1 + 2, 3 + 4, 5 + 6) in which Etruscan dice are marked.³ The doubt as to their being numerals is reinforced by the Korean die inscribed with the prayer to Buddha (p. 821).

20. SAI. Dice,⁴ Japan. Pair of plaster dice for *Sugoroku* (No. 28).

Japanese dice are similar to those of China, from which country they were doubtless borrowed. The "fours" are sometimes, but not invariably, marked in red. The most popular game is *Sugoroku* (No. 28).

Before leaving the subject of dice it may be observed that cubical dotted dice do not appear to have been known to the American tribes before the time of the conquest. At the same time mention should be made of a die of steatite found with Indian remains at Kiokee Creek, Columbia County, Georgia, in the collection of Dr. Roland

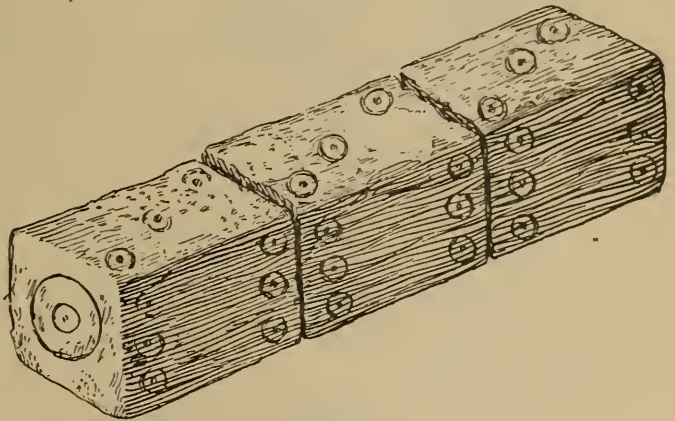


Fig. 153.

ETRUSCAN TRIPPLICATE DIE.

Length, $3\frac{1}{2}$ inches.

Chiusi.

Museum of Archaeology, University of Pennsylvania.

Steiner, in the United States National Museum (Cat. No. 172563). It consists of a rudely cut square prism of steatite about $\frac{7}{8}$ inch in length. Two of the opposite longer sides are marked with six and four pits and two with five and three. One of the ends has two and the other what is doubtless intended for one dot. The pips are irregularly disposed. It no doubt dates from the time of white contact.

¹Etruscan Researches, London, 1874.

²"*Mach* is opposite *Zal*, *Thu* is opposite *Huth*, and *Ki* is opposite *Sa*." Robert Ellis, *Etruscan Numerals*, London, 1876.

³Since the above was written the writer has acquired an Etruscan triplicate bone die (fig. 153) found in Chiusi or its vicinity, on which the dots are arranged differently from any thus far noticed by him. The 6 is here opposite the 4, and 5 opposite 3. One of the ends is marked 1 and the other 2. The spots are marked with small dotted circles which retain traces of red paint. It has been suggested that these triplicate dice, which are not infrequent, are unfinished and have yet to be sawed apart. It is evident from this specimen that such is not the case. They bear a strong general resemblance to the *Ramala pásá*, or dice used in fortune-telling, among which we find three cubical dice united by a metal bar, and again, in another variety used in India, the same arrangement of spots: 3, 4, 5, 6 on a long die. (See p. 824.)

⁴Cat. No. 7143, Mus. Arch., Univ. Penn.

21. KWAT P'AI.¹ "Bone tablets," dominoes. Canton, China.

Set of thirty-two domino pieces of teak wood $2\frac{5}{8}$ inches by $\frac{7}{8}$ inch by $\frac{3}{8}$ inch. Natural wood, with incised spots painted white and red.

Chinese dominoes are marked in the same manner as the dice, from which they are clearly derived. There are twenty-one distinct pieces, representing the permutations of two dice. Eleven of these pieces are doubled, making a total of thirty-two in the set. Each piece received a name, and in the popular game of *Tú t'in kau*, or "Heavens and Nines," the thirty-two pieces are divided into two suites or series, called *Man*, "civil," and *Mò*, "military."

The *Man* pieces are as follows:

- $\frac{6}{6}$, called *t'in*, "Heaven."
- $\frac{1}{1}$, called *tí*, "Earth."
- $\frac{4}{4}$, called *yan*, "Man."
- $\frac{1}{3}$, called *wo*, "Harmony."
- $\frac{5}{5}$, called *múi*, "plum flower."
- $\frac{3}{3}$, called *chéung sam*, "long threes."
- $\frac{2}{2}$, called *pán tang*, "bench."
- $\frac{6}{5}$, called *fú t'au*, "tiger's head."
- $\frac{6}{4}$, called *hung t'au shap*, "red-head ten."
- $\frac{6}{1}$, called *kò kéuk ts'at*, "long-leg seven."
- $\frac{5}{1}$, called *hung ch'ui luk*, "red-mallet six."

Each of the above pieces is duplicated, the duplicates mating.

The *Mò* pieces:

- $\frac{2}{4}$ and $\frac{1}{2}$, called *chí tsün*, "supreme."
- $\frac{6}{3}$ and $\frac{4}{5}$, called *tsáp kau*, "heterogeneous nines."
- $\frac{6}{2}$ and $\frac{5}{3}$, called *tsáp pát*, "heterogeneous eights."
- $\frac{4}{3}$ and $\frac{5}{2}$, called *tsáp ts'at*, "heterogeneous sevens."
- $\frac{1}{4}$ and $\frac{2}{3}$, called *tsáp 'ng*, "heterogeneous fives."

They mate as above. The two pieces called *chí tsün*, or "supreme," when paired rank as the highest of the *Mò* series, but when apart, as the lowest.

The game of *Tá t'in kau* is in many respects the most interesting Chinese domino game. It somewhat resembles the card games of Europe, and is of considerable antiquity in China, existing, according to Mr. Wilkinson,² in 1120 A. D.

The invention of the game of dominoes has been variously attributed to the Jews, the Greeks, and the Chinese. It may be justly credited to the latter people. No date can be assigned to its invention, and from the cosmical associations of the pieces, and their use in divination, which continues in China to the present day, it may be regarded as having been originally used for that purpose. That dominoes originated in dice is clearly apparent, the chief problem being the reason for the duplication of the eleven pieces. With the knowledge derived from the study of games in general, this may be assumed to have been done

¹ Cat. No. 131397, U.S.N.M. Gift of Mrs. J. K. Van Rensselaer. Chinese Games with Dice and Dominoes, fig. 18, Report U. S. Nat. Mus., 1893, p. 510.

² Chinese Origin of Playing-Cards, American Anthropologist, January, 1895.

in order that the dice throws might accord with the thirty-two points that represent the Four Quarters and the intermediary divisions of the world. They may be looked upon as having been implements of magic for determining number and place, corresponding with playing cards, from which they only differ in material, as Mr. Wilkinson has suggested.¹

In addition to the long wooden dominoes, small dominoes, made of bamboo, or bone, or wood and bone conjoined like those of Korea, are used in various parts of China. Sets in which the series is several times duplicated also occur in China, as well as dominoes on which the dots are replaced by the characters that stand for the chess pieces, and the suit marks of certain Chinese playing-cards.²

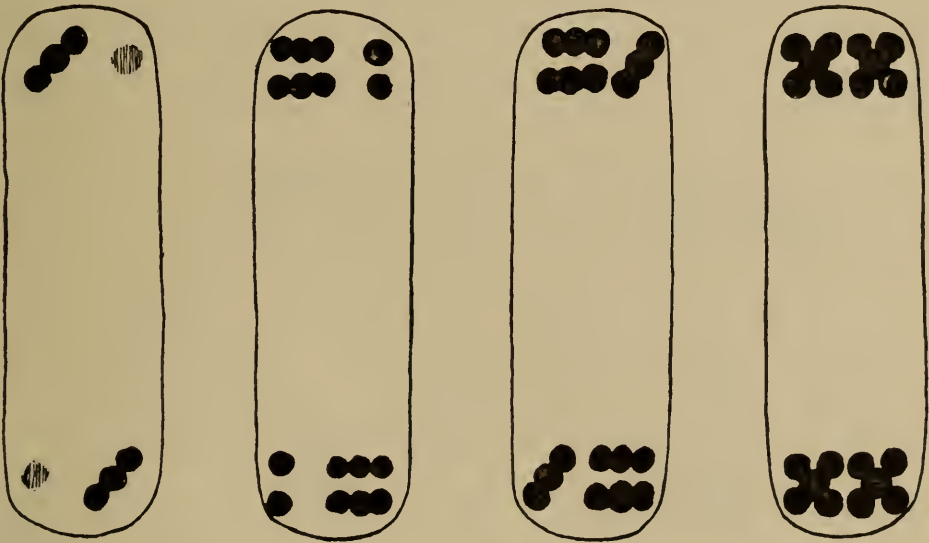


Fig. 154.

DOMINO CARDS.

Length, $3\frac{5}{8}$ inches.

China.

From W. H. Wilkinson, Chinese Origin of Playing Cards, *The American Anthropologist*, January, 1895.

Cat. No. 27, Museum of Archaeology, University of Pennsylvania. Wilkinson collection.

22. TÍM CHÍ P'ÁI. "Dotted paper tablets." Domino playing cards.³ Hankow, China.

Set of eighty-four cards, $3\frac{5}{8}$ inches by 1 inch, with rounded corners and red backs, consisting of the twenty-one natural dominoes of the Chinese series, quadrupled (fig. 154).

¹The writer is inclined to believe that in the assignment of the dice casts to the thirty-two points, they were first practically applied to as many divining slips or arrow lots, consisting of long, narrow strips of bamboo. Such objects occur at the present day in the so-called *chiú p'ái*, or "leaping tablets," of which a set from Fuh-chau exists in the Museum of the Long Island Historical Society. They consist of thirty-two slips of bamboo, about 14 inches in length, with domino spots marked at one end, contained in a cylindrical bamboo box from which they are thrown, resembling the *Ts'im ü* (No. 69).

²For a detailed account of Chinese dominoes, consult Mr. Wilkinson's catalogue in *Official Catalogue of Exhibits, World's Columbian Exposition, Department M. Anthropological Building, Chicago, 1893.*

³Cat. No. 27, Mus. Arch., Univ. Penn. Wilkinson collection.

These cards are designated by the collector, Mr. W. H. Wilkinson, as *Pát t'in kau* from their being used in the game of *T'in kau*. Several varieties of domino cards occur in China. The evolution of playing cards from dice through the wooden domino seems at first sight to be clearly apparent, but the true ancestor of the playing card is doubtless found in the arrow, as shown under Korean playing cards.

23. KOL-HPAI. "Bone Tablets." Dominoes. Korea.

(a) Set of thirty-two domino pieces.¹

(b) Reproduction of native picture.

Ki-sǔing (singing girls) playing dominoes with a guest (Plate 26).²

Korean dominoes consist of small bone or ivory tablets, or of bone and wood conjoined like those exhibited. The set consists of thirty-two pieces, identical with those of China. They receive different names, however, and are mated differently from the Chinese. The names are as follows:

- 1-1, *syo-syo* (Chinese, *siú siú*), "smallest."
- 1-2, *tjoui-hko* (Chinese, *shü pí*), "rat nose."
- 1-3, *syo-sam* (Chinese, *siú sám*), "small and three."
- 1-4, *páik sǎ* (Chinese, *pák sz'*), "white and four."
- 1-5, *páik-i* (Chinese, *pák 'ng*), "white and five."
- 1-6, *páik-ryouk* (Chinese, *pák luk*), "white and six."
- 2-2, *tjoun-a* (Chinese, *tsun á*), "superior two."
- 2-3, *a-sam* (Chinese, *á sam*), "two and three."
- 2-4, *a-sá* (Chinese, *á sz'*), "two and four."
- 2-5, *koan-a* (Chinese, *kun á*), "sovereign two."
- 2-6, *a-ryouk* (Chinese, *á luk*), "two and six."
- 3-3, *tjyang-sam* (Chinese, *ch'éung sám*), "long three."
- 3-4, *sam-sá* (Chinese, *sám sz'*), "three and four."
- 3-5, *sam-o* (Chinese, *sám 'ng*), "three and five."
- 3-6, *sam-ryouk* (Chinese, *sám luk*), "three and six."
- 4-4, *tjoun-hong* (Chinese, *tsun hung*), "superior red."
- 4-5, *sǎ-o* (Chinese, *sz' 'ng*), "four and five."
- 4-6, *sǎ-ryouk* (Chinese, *sz' luk*), "four and six."
- 5-5, *tjoun-o* (Chinese, *tsun 'ng*), "superior five."
- 5-6, *o-ryouk* (Chinese, *'ng luk*), "five and six."
- 6-6, *tjoun-ryouk* (Chinese, *tsun luk*), "superior six."

The method of pairing is shown in fig. 155.³ The Korean games differ from those of China, the most popular, called *Hō-hpai*, "Foreign or Chinese Tablets," having many points of resemblance to the Chinese system of fortune-telling in which dominoes are used (See Chinese Games with Dice and Dominoes). Korean dominoes are clearly of Chinese origin.

24. DOMINOES.⁴ Burma.

Set of twenty-four pieces of teak wood.

¹ Cat. No. 77024, U.S.N.M. Collected by Lieut. J. B. Bernadon, U. S. N.

² From Korean Games.

³ The errors in the plate (9) in the Report of the U. S. National Museum, 1893, are here corrected.

⁴ Cat. No. 166540, U.S.N.M. Collected by Mr C. C. Ellis, acting United States Consular Agent. Chinese Games with Dice and Dominoes, plate 10, Report U. S. Nat. Mus., 1893, p. 528.

학도능려필필리필성리



From painting by native artist, reproduced in Korean Games.

Burmese dominoes resemble in size and material the wooden dominoes of Southern China. They are marked with incised circles (sometimes with small brass disks) as follows:

6-6, 1-1, 4-4, 1-3, 5-5, 3-3, and 2-2 duplicated, and one each of the following pieces: 6-3, 4-5, 6-2, 5-3, 4-3, 5-2, 2-4, 1-4, 2-3, and 1-2, the last having two smaller spots adjoining the "1."

They are accompanied by a cubical die about $\frac{3}{4}$ inch square, with two opposite faces marked with one spot, two opposite faces marked with two spots, and two opposite faces marked with three spots. This is used to decide who shall play first.

Dominoes are also a common game in Siam, where they are called *Tau-tem* (Chinese, *tú-tím*), "Arranging," or "Connecting Spots." A set consists of twenty-four pieces, thin, rectangular tablets of ivory, marked as follows: the pieces 6-6, 1-1, 4-4, 1-3, 5-5, 3-3, 2-2, 5-6, 4-6, 1-6, and 1-5 duplicated, and one of each of the pieces 6-3 and 6-2. Both Burmese and Siamese dominoes are probably derived from China.

25. DOMINOES. United States.¹ Set of twenty-eight pieces, bone, with black wood backs.

Dr. Gustav Schlegel states that the European game of dominoes was borrowed from the Chinese, the philosophic-astromonic elements being done away with, and only the arithmetical retained.

The game seems to date from a recent period in Europe. According to Brockhaus' *Conversations-Lexikon*, Article "Domino," it was introduced into Germany through France from Italy about the middle of the last century. In England it appears, from a writer in *Notes and Queries*, to have been introduced by French prisoners about the close of the last century.

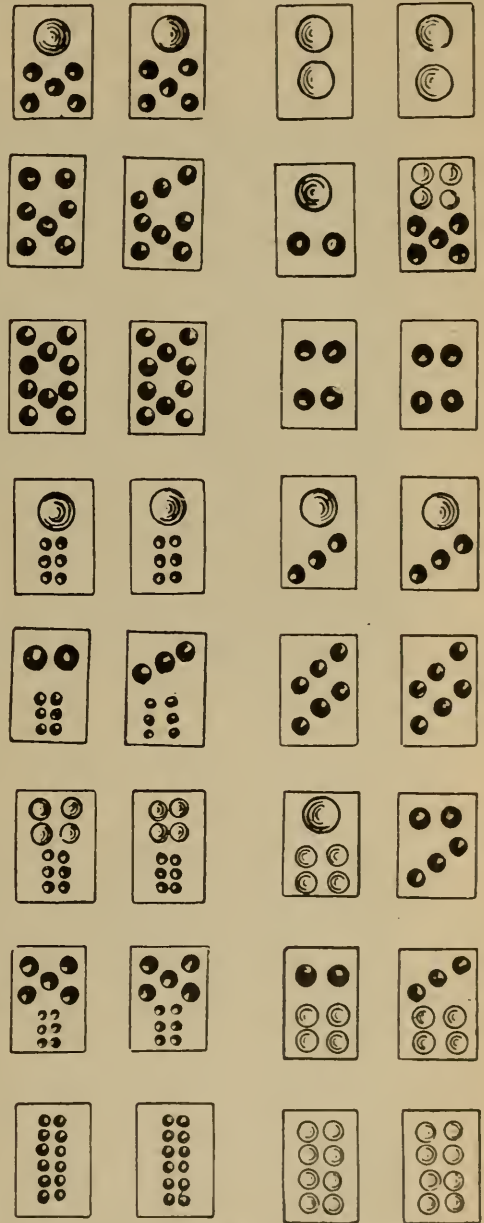


Fig. 155.

KOL-HPAI DOMINOES.

Korea.

Cat. No. 77024, U.S.N.M.

From Korean Games.

¹ Cat. No. 17576, Mus. Arch., Univ. Penn. Purchased in Washington, D. C.

26. DOMINOES.¹ Eskimo. Labrador, North America.

Flat pieces of ivory, cut in irregular shapes, marked on one face with spots arranged in different patterns. The number of pieces in a set varies from sixty to one hundred and forty-eight.

According to Mr. Lucien M. Turner, by whom they were collected, the game is played in the following manner:

Two or more persons, according to the number of pieces in the set, sit down and pile the pieces before them. One of the players mixes the pieces together in plain view of the others. When this is done, he calls them to take the pieces. Each person endeavors to obtain a half or third of the number, if there be two or three players. The one who mixed up the pieces lays down a piece and calls his opponent to match it with a piece having a similar design. If this can not be done by any of the players, the first has to match it, and the game continues until one of the players has exhausted all of the pieces taken by him. The pieces are designed in pairs, having names such as *ka mú tik* (sled), *kaiaik* (canoe), *kalé sak* (navel), *á ma zut* (many), *a taú sîk* (1), *má kok* (2), *píng a sut* (3), *si tá mút* (4), and *tá li mat* (5). Each of the names above must be matched with a piece of similar kind, although the other end of the piece may be of a different design. A *kamutik* may be matched with an *amazut*, if the latter has not a line or bar cut across it; if it has a bar, it must be matched with an *amazut*.

This game is known to the people of the Ungava district, but those only who learn it from Northerners are able to play it. The northern Eskimo stake the last article they possess on the issue of the game. Their wives are disposed of temporarily, and often are totally relinquished to the victor. I have heard of wives so disposed of often sit down and win themselves back to their former owners.

The game appears to have been borrowed from European rather than Asiatic sources.

Another set of Eskimo dominoes (Plate 27), differing in their marks from the preceding, is contained in the American Museum of Natural History in New York City (Cat. No. $\frac{60}{1177}$). It was collected by Capt. George Comer from the Central Eskimo of Savage Islands, West Coast of Hudson Bay, and consists of thirty-six pieces of ivory marked with dots, running irregularly from eight on one side down to blank. It is clearly a degenerate form of the European game.

27. CHONG ÜN CH'AU. Game of the Chief of the Literati. Canton, China. Tallies and dice.²

Chong ün ch'au is played with tallies, *ch'au*, the highest of which is called *chong ün*, the name given the Optimus at the examinations for the degree of Hanlin, whence I have styled it "The Game of the Chief of the Literati." Two or more persons may play, using six dice and sixty-three bamboo tallies. The players throw in turn from right to left, and after throwing each draws the tally he is entitled to for his throw.

This game is in many respects analogous to the Game of Promotion

¹ Cat. No. 76880, U.S.N.M. Chinese Games with Dice and Dominoes, plate 12, Report U. S. Nat. Mus., 1893, p. 529.

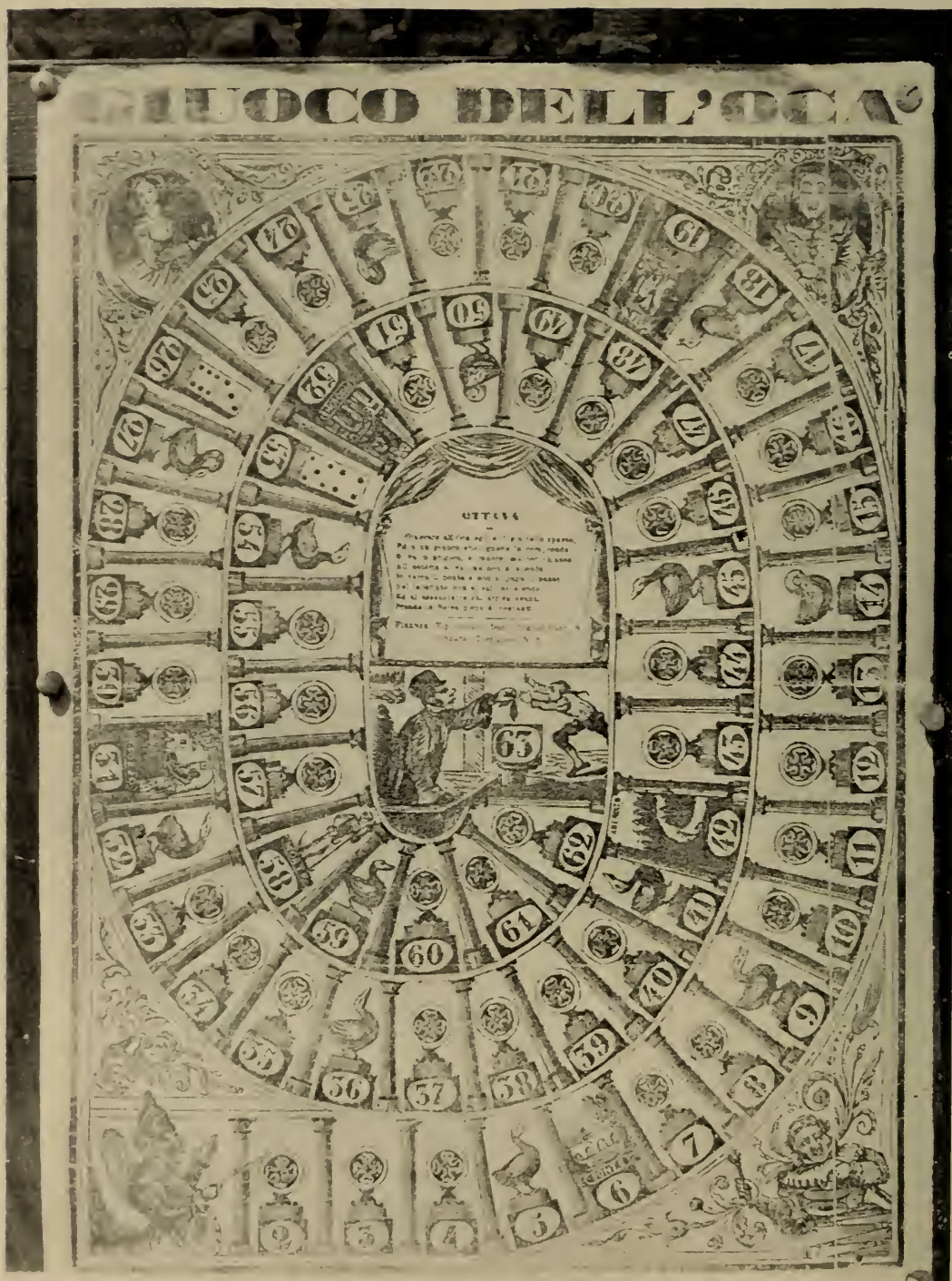
² Cat. No. 25539, U.S.N.M. Gift of Stewart Culin. Chinese Games with Dice and Dominoes, plate 3, Report U. S. Nat. Mus., 1893, p. 496.



SET OF IVORY DOMINOES.

Savage Islands.

Cat. No. 1177, American Museum of Natural History, New York.



GAME OF GOOSE (*Gioco Dell' Oca*).

Length, 16 inches; width, 12 inches.

Florence, Italy.

Cat. No. 17373, Museum of Archæology, University of Pennsylvania.

(No. 6), the titles of different officials being painted upon tallies instead of being printed upon a diagram. The form of the tallies suggest the probability of their having been derived from arrows. An American Indian analogue is found in the Micmac game of *woltes-takun* (p. 697).

28. SUGOROKU. "Double Sixes." Japan. Board¹ and teetotum.²

A common game with Japanese children, usually played at the New Year. The diagram or board, which is printed in colors, is divided into a number of divisions distinguished by pictures. One of the most popular forms is called *dô chiu*, or "traveling" *sugoroku*, and is played upon a large sheet of paper on which are represented the various stopping places on a journey. The moves are made according to the throws with one or more dice, or with a teetotum (Japanese *coma*). The game exhibited is entitled *Nan niyo ichi dai shus-sei sugoroku* or "Boys and girls step by step advancing *sugoroku*," and is printed in colors upon a large sheet of paper. Another game in the museum is entitled *Kamakura ei-yu sugoroku*, or "The heroes of Kamakura *sugoroku*," and another, *Gakko sei-to ben kiyo surgoroku*, or "School-students studying *sugoroku*." New games are published in Japan at each recurring New Year. Like the corresponding games at the present day in Europe and America, they frequently reflect whatever is uppermost in the popular mind. Thus, in 1894-95 the war with the Chinese gave rise to the *Shina sei-batsu sugoroku*, or "Punishing China *surgoroku*," a specimen of which is in the University Museum (Cat. No. 17687). The name *sugoroku* is more correctly applied to the game of backgammon played with two dice, but is used at the present day in Japan to designate all games played on boards or diagrams in which the moves are made by throwing dice.

29. JEU DE L'OIE. Game of Goose.³ France.

Folding board imprinted with diagram 14 by 18 inches, having sixty-three numbered stations; dice and men.

The pieces are moved according to the throws. A common game in France at the New Year.

30. GIUOCO DELL' OCA. "Game of Goose." Florence, Italy.

Lithographed diagram⁴ with ninety numbered stations around which the players move their men, according to the throws. (Plate 28.)

31. JUEGO DE LA OCA. Game of Goose.⁵ Mexico.

Paper diagram printed with sixty-three numbered stations. Similar to the preceding. A similar Mexican game entitled the *Juego del Laberinto*, in the University Museum (Cat. No. 16474) has sixty-three

¹ Cat. No. 7130, Mus. Arch., Univ. Penn.

² Cat. No. 7139, Mus. Arch., Univ. Penn.

³ Cat. No. 15489, Mus. Arch., Univ. Penn.

⁴ Cat. No. 15503, Mus. Arch., Univ. Penn.

⁵ Cat. No. 18263, Mus. Arch., Univ. Penn.

numbered stations arranged to represent a snake, the direction being from head to tail.

32. GAME OF GOOSE.¹ United States.

Board, men, and spinning arrow² used instead of dice. The board has ninety-nine numbered stations.

33. SNAKE GAME.³ United States.

Board printed in colors with one hundred and twenty-two numbered stations.

The first game of this type published in the United States is said to have been "The Mansion of Happiness," issued by Mr. S. B. Ives of Salem, Massachusetts, about the year 1847, and said to have been copied from an English game. Mr. Ives was the first publisher of games as a business in this country. In 1861 Mr. Milton Bradley of Springfield, Massachusetts, published the "Checkered Game of Life." These were the forerunners of a large number of similar games in the United States, among which the following are included in the collection of the University of Pennsylvania: "Steeple Chase"; "Yacht Race"; "Bicycle Race"; "Messenger Boy"; "Round the World," together with others with more or less fanciful titles invented in order to secure the protection of copyright.

The prototype of the boards in these and the preceding games (Nos. 28 to 32) is to be found in the Korean *Nyout* circuit.

The following foreign games of the foregoing type are contained in the collection of the Museum of Archaeology and Paleontology of the University of Pennsylvania.⁴

¹ Cat. No. 16467, Mus. Arch., Univ. Penn.

² A square of cardboard, with the numbers from 1 to 6 arranged in a circle, and a metal arrow fastened to revolve on a pivot in the center. It and similar contrivances are substituted on account of the prejudice against the use of the dice through their association with gambling.

³ Cat. No. 175656, U.S.N.M. Gift of Stewart Culin.

⁴ The European specimens are in greater part the gift of Dr. H. Carrington Bolton. See his paper, *The Game of Goose*, *Journal of American Folklore*, VIII, p. 145.

Museum No.	Publisher's No.	Name.	Place of manufacture.	Publisher.	Material.	Size. ¹	Number of houses or stations.	Implements.	Number.
7132		CHINESE. Shing kún t'ò	Peking		Paper.	Inches. 23 by 25	409	Dice	4
17513	7429	DANISH. Allerøeste Gaasespil.	Germany		do	12 by 14	100	do	2
17514		DUTCH. Jeu du cacao van Houten	Amsterdam	Amand. Lith	do	20 by 27	63	do	2
17397		ENGLISH. The New Royal Game of Goose.	England		do	16 by 20	63	Tectotum.	1
17420		FRENCH. Jeu du conscrit	Epinal	Pellerin et Cie	do	15 by 20	63	Dice	2
17421		Jeu des courses de chevaux	do	do	do	13 by 21	100	do	2
17417		Jeu historique de la France militaire	do	do	do	14 by 20	63	do	2
17418	1738	Jeu de la marine	do	do	do	15 by 20	63	do	2
15489		Jeu de l'oie	do	do	Cardboard	14 by 18	63	do	2
17424	722	Jeu militaire	do	Oliver-Pinot	Paper	11 by 16	63	do	2
17423		Jeu de l'oie	do	Pellerin et Cie	do	9 by 9	63	do	2
17414	481	do	do	do	do	11 by 14	63	do	2
17422	1713	Grand jeu de l'oie	do	do	do	14 by 18	63	do	2
17419	1711	Jeu de l'oie renouvelé des Grecs	do	do	do	14 by 17	63	do	2
17400	1	Jeu de l'oie	do	Oliver-Pinot	do	14 by 18	63	do	2
17425	721	do	do	do	do	10 by 15	63	do	2
17416	1735	Jeu du petit voyageur	do	Pellerin et Cie	do	14 by 20	63	do	2
17415	501	Jeu du soldat	do	do	do	11 by 15	63	do	2
17402	177	Jeu du chemin de fer	do	P. Didion	do	9 by 14	63	do	2
17404	398	Jeu de Juif-Errant	Metz	do	do	9 by 14	63	do	2

² This is only given when the number of dice appears in the rules.

¹ The size of the imprint is indicated to the nearest inch.

Games of Goose in Museum of Archaeology and Palaeontology, University of Pennsylvania—Continued.

Museum No.	Publisher's No.	Name.	Place of manufacture.	Publisher.	Material.	Size.	Number of houses or stations.	Implements.	Number.
FRENCH—continued.									
17407		Jeu de Juif-Errant	Metz	P. Didion	Paper	Inches. 15 by 20	63	Dice	2
17401	397	Jeu moral et instructif	do	do	do	9 by 14	63	do	2
17409		do	do	do	do	15 by 20	63	do	2
17398		Jeu des mystères de Paris	do	Gangel	do	14 by 20	63	do	2
17403	121	Jeu de l'oise renouveau des Grecs	do	P. Didion	do	11 by 16	63	do	2
17405		do	do	do	do	15 by 20	63	do	2
17399	44	do	do	Gangel	do	14 by 20	63	do	2
17412		Jeu des rois de France	do	Delhalt	do	15 by 20	63	do	2
17410		do	do	P. Didion	do	15 by 20	63	do	2
17413		Grand jeu du sorcier	do	Delhalt	do	15 by 20	63	do	2
17438	1	Jeu d'oise	Weissenburg	C. Burekardt	do	14 by 19	63	do	2
17430		Grand jeu du pont terrible	Nancy	E. Ferry	do	15 by 22	52	do	2
17429		Grand jeu de l'amour	Paris	A. Repos	do	14 by 16	40	do	2
17516		Grand jeu du pigeon voyageur	do	(imp.) Lehoucq	do	25 by 31	87	do	2
16253		Le voyage à Pékin	do	Watillaux	Folding board	19 by 19		Teetotum	1
17428		Grand jeu franco-russe	Pont-à-Mousson	Marcel Vagne	Paper	15 by 20	63	Dice	2
17427	269	Jeu de l'oto	do	do	do	14 by 18	63	do	2
17426	322	do	do	do	do	10 by 15	63	do	2
17517	2069	do	do	do	do	9 by 12	63	do	
17519		do	do	do	Folding board	18 by 22	63	do	
17518		Le tour de monde	do	do	Paper	11 by 13	46	do	
16475		Jeu de tournoi	do	do	do	18 by 21	74	do	2
GERMAN.									
17433		Eisenbahn-Spiel	Mainz	Jos. Scholz	do	11 by 15	56	do	2
17434	3	Post- und Reise-Spiel	do	do	do	10 by 15	56	do	2
17431	2	Robinson-Spiel	do	do	do	13 by 14	30	do	2

17432	6	Belagerungs-Spiel	do	do	do	do	12 by 13	29
17494	8871	Das Gänsepiel	New-Ruppin	Gustav Kühn.	do	do	11 by 14	54
17491	8798	Das neue Gänsepiel	do	do	do	do	12 by 14	100
17493	5835	Das Jagdspiel	do	do	do	do	11 by 11	41
17490	5808	Neues Matrosenspiel	do	do	do	do	10 by 12	32
17495	7583	Die Reise um die Welt zu Wasser und zu Lande.	do	do	do	do	1 12	41
17482	6638	(Das neue Affenspiel	do	Oehmigke & Rom- schneider.	do	do	7 by 9	54
17473	8455	{ Das neue Gänsepiel	do	do	do	do	7 by 9	56
17474	8800	Das neue Affen-Spiel	do	do	do	do	12 by 12	63
17475	8020	Das neueste Affenspiel	do	do	do	do	12 by 13	100
17465	8021	Neues deutsches Flaggon-Spiel	do	do	do	do	12 by 15	100
17479	3067	Eisenbahn-Spiel	do	do	do	do	12 by 15	70
17475		Neues Eisenbahn- und Dampfschiff- fahrts-Spiel.	do	do	do	do	10 by 15	36
17476	6139	Das neue Gänsepiel	do	do	do	do	10 by 13	56
17476	7445	Das neue Gänse-Spiel	do	do	do	do	10 by 13	56
17452	9045	Neues Gänsepiel	do	do	do	do	11 by 11	65
17469	7063	Allernewuestes Gänse Spiel	do	do	do	do	12 by 15	63
17472	7086	do	do	do	do	do	12 by 14	100
17453	8017	Neues Glückes-Spiel	do	do	do	do	12 by 13	100
17471	2015	Das Hasen-Spiel	do	do	do	do	12 by 12	63
17462	2793	Neuestes Jagdspiel	do	do	do	do	11 by 14	33
17468	6306	Das Kaiser-Spiel	do	do	do	do	10 by 14	30
17454	8019	Kriegs-Spiel	do	do	do	do	12 by 15	70
17467	9004	Allernewuestes Kriegs-Spiel	do	do	do	do	10 by 14	45
17458	9046	Allernewuestes Lotterio-Spiel	do	do	do	do	12 by 15	55
17464	8025	Das Matrosen-Spiel	do	do	do	do	12 by 14	40
17478	8994	Müller u. Schornsteinfegereselle auf der Wanderschaft.	do	do	do	do	12 by 15	42
17477	7544	Neuestes Post- u. Reise-Spiel	do	do	do	do	11 by 14	44
17480	9047	Neues Reisespiel mit Kindernissen	do	do	do	do	10 by 14	70

1 Round: diameter.

Games of Goose in Museum of Archaeology and Paleontology, University of Pennsylvania—Continued.

Mu- seum No.	Pub- lisher's No.	Name.	Place of manufacture.	Publisher.	Material.	Size.	Number of houses or sta- tions.	Implements.	Nu- m- ber.
		GERMAN—continued.							
17470	1512	Das Robinson-Spiel.....	Neu-Ruppin.....	Oehmigke & Rem- schneider.	Paper.....	<i>Inches.</i> 11 by 12	31	Teetotum.....	.....
17461	8018	Wer will Schwarzer Peter werden?.....	do.....	do.....	do.....	12 by 12	70	do.....	2
17457	6043	Der Seefahrer.....	do.....	do.....	do.....	12 do	25	do.....	.....
17483	7055	Schulze und Müller's Wettreise durch Afrika.	do.....	do.....	do.....	11 by 15	48	do.....	.....
17463	7448	Neues Wetrennen-Spiel.....	do.....	do.....	do.....	10 by 15	33	do.....	2
17481	8023	Allerneuestes Wetrenn-Spiel.....	do.....	do.....	do.....	12 by 15	100	do.....	1
17445	34 <i>g</i>	Affen-Spiel.....	Weisenburg.....	C. Burekardt.....	do.....	12 by 13	63	do.....	2
17441	1073	Neuestes Affen-Spiel.....	do.....	do.....	do.....	12 by 13	63	do.....	2
17443	1071	Neues Bank-Spiel.....	do.....	do.....	do.....	12 by 12	100	do.....	2
17450	34 <i>a</i>	Blumen-Spiel.....	do.....	do.....	do.....	13 by 13	29	do.....	2
17439	34 <i>f</i>	Eisenbahn-Spiel.....	do.....	do.....	do.....	10 by 15	36	do.....	2
17436	29	Gänse-Spiel.....	do.....	do.....	do.....	12 by 15	63	do.....	2
17435	1	do.....	do.....	do.....	do.....	14 by 19	63	do.....	2
17440	34 <i>c</i>	Neues Gänsepiel.....	do.....	do.....	do.....	13 by 13	100	do.....	2
17442	1072	Neues Hasen-Spiel.....	do.....	do.....	do.....	12 by 12	73	do.....	2
17451	30	Hanswurst-Spiel.....	do.....	do.....	do.....	2 15	32	do.....	1
17447	1074	Neues Hintz und Peter-Spiel.....	do.....	do.....	do.....	12 by 13	85	do.....	2
17446	1070	Neues schwarzer Peter-Spiel.....	do.....	do.....	do.....	12 by 12	70	do.....	2
17448	34 <i>b</i>	Völker-Spiel.....	do.....	do.....	do.....	13 by 13	25	do.....	1
17444	1069	Neues Wetrenn-Spiel.....	do.....	do.....	do.....	12 by 13	61	do.....	2
17503	1	Pferdebahn-Spiel.....	do.....	do.....	do.....	12 by 15	36	do.....	2
17504	6	Wettennen.....	do.....	do.....	do.....	12 by 15	36	do.....	2
17505	7	Regattenspiel.....	do.....	do.....	do.....	12 by 15	36	do.....	2
17506	8	Ritterturnier.....	do.....	do.....	do.....	12 by 15	36	do.....	2
17509	44	Touristen-Spiel.....	do.....	do.....	do.....	12 by 15	36	do.....	2

17507	46	Jagd-Spiel	Ferrara.....	Fratelli Melli & D. Finzi.....	do	do	12 by 15	36	2
17508	47	Lustballon-Spiel	do	do	do	do	12 by 15	35	2
17496	34	Das neue unterhaltende Gänse-Spiel ..	do	do	do	do	12 by 16	63	2
17511	6944	Die Sonntags-Jäger	do	do	do	do	11 by 14	63	1
17497	1	Fuchs- und Gänse-Spiel	do	do	do	do	10 by 13	50	2
17498	2	Post und Reise-Spiel	do	do	do	do	10 by 13	36	.....
17499	3	Lustballon-Spiel	do	do	do	do	10 by 13	36	2
17500	4	Pferdebahn-Spiel	do	do	do	do	10 by 13	63	2
17501	5	Reise durch Europa	do	do	do	do	10 by 13	36	2
17502	6	Regatta-Spiel	do	do	do	do	10 by 13	36	2
ITALIAN.									
17382	.....	Il nuovo giuoco dell' oca	Ferrara.....	Fratelli Melli & D. Finzi.....	do	do	13 by 17	90	2
17390	.....	Giuoco del barone	Florence.....	E. Ducci.....	do	do	13 by 18	76	.....
17373	.....	Giuoco dell' oca	do	do	do	do	12 by 16	63	.....
17370	.....	do	do	do	do	do	12 by 16	63	.....
15504	.....	do	do	do	do	do	12 by 16	63	.....
17386	.....	Giuoco dell' amore e dell' ineneo	Milan.....	Gio. Gussoni.....	do	do	15 by 20	80	2
15502	.....	La battaglia dell' 48	do	Fratelli Tensi.....	do	do	17 by 25	48	2
17389	.....	Il giro del mondo	do	do	do	do	16 by 24	80	2
17385	.....	Giuoco nuovo della lanterna magica o del disinganno	do	Antonio Vallardi.....	do	do	19 by 20	73	2
17387	.....	Giuoco dell' oca	do	Orrigoni, Bianchi e Ci.....	do	do	11 by 15	63	2
17388	.....	Giuoco del tramway	do	Fratelli Tensi.....	do	do	17 by 22	63	2
17392	.....	Viaggio circolare in Italia	do	Orrigoni, Bianchi e Ci.....	do	do	20 by 25	69	2
17381	.....	Dilettevole giuoco dell' oca	Venice.....	do	do	do	11 by 15	63	2
17391	.....	Giuoco dell' oca	do	do	do	do	16 by 20	90	2
17372	.....	do	do	do	do	do	16 by 20	90	2
17371	.....	do	do	do	do	do	16 by 20	90	2
17380	.....	do	do	do	do	do	12 by 16	90	2
17381	.....	do	do	do	do	do	12 by 16	90	2
17377	.....	do	do	do	do	do	17 by 22	90	2

¹ Round; diameter.² Length, figure of a man.³ The names and rules of this and the five following games are printed in four languages—German, French, English, and Dutch.

Games of Goose in Museum of Archaeology and Paleontology, University of Pennsylvania—Continued.

Mu- seum No.	Pub- lisher's No.	Name.	Place of manufacture.	Publisher.	Material.	Size.	Number of houses or sta- tions.	Implements.	Num- ber.
17378		Ginoco dell' oca.....			Paper.....	Inches, 11 by 15	63	Dice.....	2
17374		do.....			do.....	12 by 16	63	do.....	2
17375		do.....			do.....	11 by 16	63	do.....	2
17376		do.....			do.....	12 by 17	63	do.....	2
17379		do.....			do.....	11 by 15	63	do.....	2
17380		do.....			do.....	11 by 15	63	do.....	2
17369		Vero giuoco dell' oca.....		Cesare Pacifici.....	do.....	14 by 18	63	do.....	.....
15941		Oca Francese.....		Manuscript.....	do.....	18 by 27	12	do.....	.....
JAPANESE.									
7130		Nan niyo ichi dai shus-sei sugoroku ..	Tokyo ..	Tsunejiro Shimizuya ..	do.....	17 by 20	24	.....	1
15831		Kamakura ei-yu sugoroku ..	do.....	Jingoro Wakasaya ..	do.....	13 by 17	28	.....	.....
15833		Gakko sei-to benkiyo sugoroku ..	Tokyo (1884).....	Kichibé Tsutsumi ..	do.....	13 by 18	22	.....	1
17687		Shina sei-batsu sugoroku ..	Tokyo (1894).....	Hakubunkan Com- pany.	do.....	28 by 39	33	.....	.....
KOREAN.									
17626		T'iyong-kyeng-to ..		Manuscript.....	do.....	23 by 37	108	{ Long-notched wooden die, or teetotum.	1
17699		Nam-seung-to ..		do.....	do.....	22 by 36	120	Wooden dice.....	3
17628		do.....		do.....	do.....	10½ by 10½	.....	.....	.....
SPANISH.									
16474		Juego del laberinto.....	Mexico ..	Lit. Debray Sues ..	do.....	12 by 15	63+1	Dice.....	3
18263		Juego de la oca.....	do.....	Lit. Debray ..	do.....	10 by 14	63	do.....	2
SWEDISH.									
17492	268	Nya Gåsspelet ..	Neu Ruppin ..	Gustav Kuhn.....	do.....	12 by 14	100	do.....	2

34. TÁWULAH. Backgammon. Damascus, Syria.

Folding board inlaid with mother-of-pearl and silver wire, dice, and men.¹ The game is played in the same manner as the common English game. The game of backgammon belongs to what I have designated, for convenience, as the *Nyout* series. Dr. Hyde has remarked that the six points upon each quarter of the backgammon board were devised to correspond with the six points of the cubical die.

35. TABAL. Backgammon. Johore, Malay Peninsula. Board.²

The name of this game, *tabal*, is doubtless from the Portugese *tabola* or Spanish *tabla*.

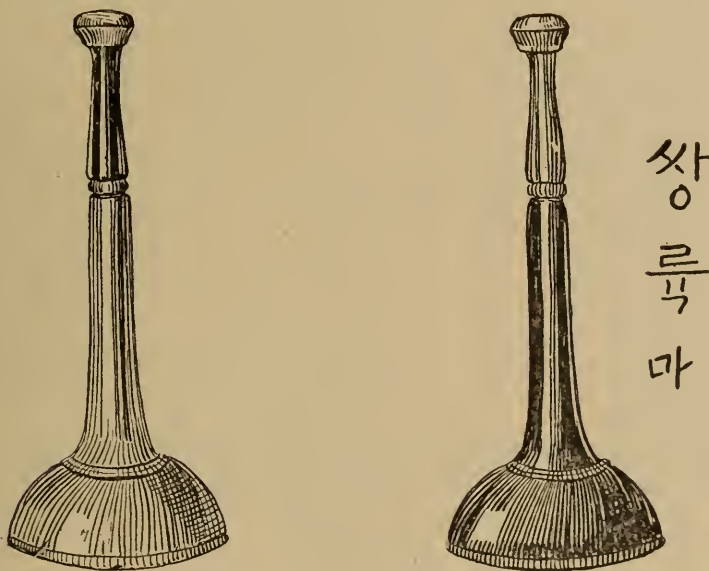


Fig. 156.

MEN FOR KOREAN BACKGAMMON GAME.

Height, 5½ inches.

Cat. No. 17601, Museum of Archaeology, University of Pennsylvania.

The game of Backgammon, played upon a board of twenty-four stations similar to the boards in common use in Spain at the present day, exists along the entire eastern coast of Asia, from Korea to the Malay Peninsula.

36. SSANG-RYOUK. Backgammon. Korea.

Reproduction of native picture of players engaged at the game.³

This game is described at length in Chinese Games with Dice and Dominoes. It is played with fifteen men, according to the throws with two dice, in the same manner as the English game of backgammon. The board consists of an unpainted box, 11 by 23½ inches, with inclosing sides 3¾ inches high. The men—called *mal*, “horses,” as in the *Nyout* game—are delicate wooden pins 2¾ inches high, with a hemispherical base (fig. 156). Those on one side are painted green, with red

¹ Cat. No. 7710, Mus. Arch., Univ. Penn.

² Cat. No. 16586, Mus. Arch., Univ. Penn. Chinese Games with Dice, fig. 10, Report U. S. Nat. Mus., 1893, p. 502.

³ From Korean Games.

tips, and those on the other red, with green tips, agreeing in this respect with the pieces in the Hindu game of *Pachisi*, which sometimes have the green pieces tipped with red and the red with green in the same manner, as in the Burmese game (No. 41). An interesting pecul-

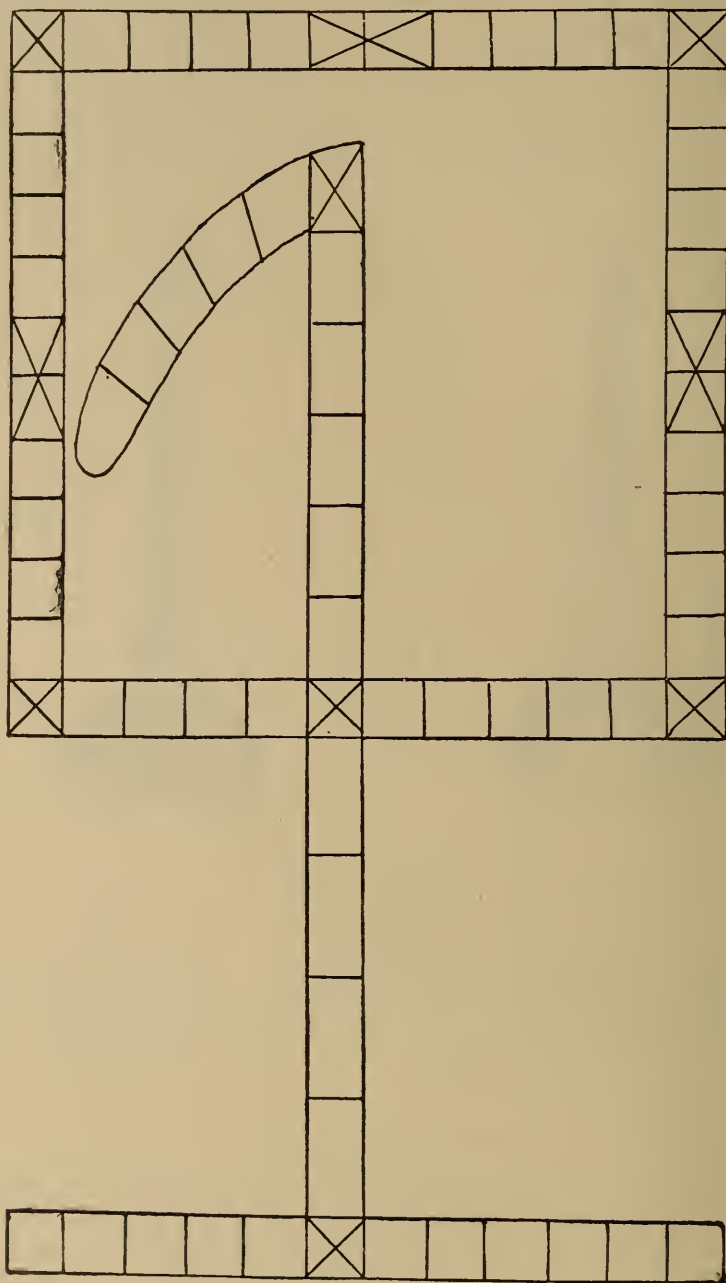


Fig. 157.

COWRIE GAME (*Kawade Kelia*).

Board, 12 by 24½ inches.

Ceylon.

Cat. No. 16471, Museum of Archaeology, University of Pennsylvania.

iarity of the men is that they are each marked with the name of a famous Korean *Ki-săing*, or “singing girl,” which is inscribed in Chinese characters on the bottom of each piece.

This Korean game nearly agrees with the Chinese backgammon game

described by Dr. Hyde under the name of Coan ki (*Tsun k'i*), or the "Bottle Game."¹

37. KAWADE KELIA. Cowrie game. Ceylon. Board and cowries.²

The board, 12 by 24½ inches, is marked with a design cut in the wood (fig. 157). It is elevated by two strips of wood nailed transversely across the bottom, and bears a nearly obliterated diagram for the same game in blue paint. From the exhibit of the Government of Ceylon at the Columbian Exposition, Chicago. Two or four persons play. In the latter case, two play as partners. Cowries of different kinds are used as men, each player having three. These are called *balu*, "dogs" (singular, *balo*). The moves are made, according to the throws, with six cowrie shells. The counts are as follows:

- 6 mouths up = 6
- 5 mouths up = 5
- 4 mouths up = 4
- 3 mouths up = 3
- 2 mouths up = 2
- 1 mouth up = 1

The players stand at opposite sides of the bottom of the board and finish at the end of the interior diagram, making the circuit in opposite directions. A player may take and set back an opponent's piece, unless it be upon one of the squares crossed by diagonals, called *catty*. A similar game is played in southern India under the name of *Gavalata*, or "cowrie play," upon a square checkered board having an odd number of squares upon a side (fig. 158). Two or four persons play, each using one or two cowries as men, which they move according to the throws with four or five cowries.³

When two play, one starts at A and the other at B, moving in the direction of the arrows. The object is to traverse all the squares to the center. A player kills and sends back an opponent's piece when his own falls upon the same square, unless it rests in a protected square or "castle."⁴

These games are clearly related to the following game, *Pachisi*. The cowries used in it, as in *Pachisi*, may be regarded as a convenient substitute for staves.

38. PACHISI. The Game of "Twenty-five." India. Cloth, cowries, and men.⁵

"The implements for the game of *Pachisi*, a most popular game in

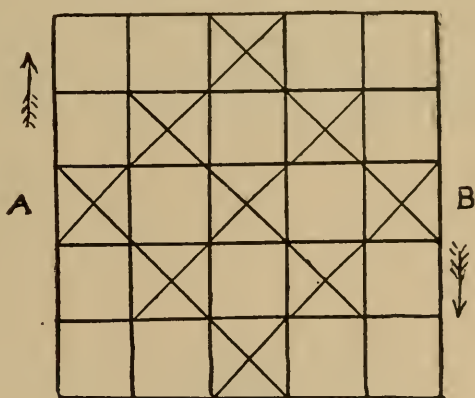


Fig. 158.

BOARD FOR "COWRIE PLAY" (*Gavalata*).
Southern India.

¹ De Ludis Orientalibus, Oxford, 1694, p. 65.

² Cat. No. 16471, Mus. Arch., Univ. Penn.

³ A similar Hindu game is figured and described by Mr. Edward Falkener (*Games, Ancient and Oriental*, p. 265) under the name of *Ashta-kashte*.

⁴ Children and others who can not afford cowries play with tamarind seeds rubbed smooth on one side.

⁵ Cat. No. 153344, U.S.N.M.

India, consist of a cloth or board, sixteen wooden or ivory pieces or men, and seven cowrie shells. The board consists of four rectangles, with their narrow sides so placed as to form a square in the center (fig. 159). Each rectangle is divided into twenty-four small squares, consisting of three rows of eight squares each. The game is usually played by four persons, each of whom is furnished with four ivory or wooden cones called *gôte* of a peculiar color for distinction, and takes his station opposite one of the rectangles. His pieces, *gôte*, start one by one from the middle row of his own rectangle, beginning at the

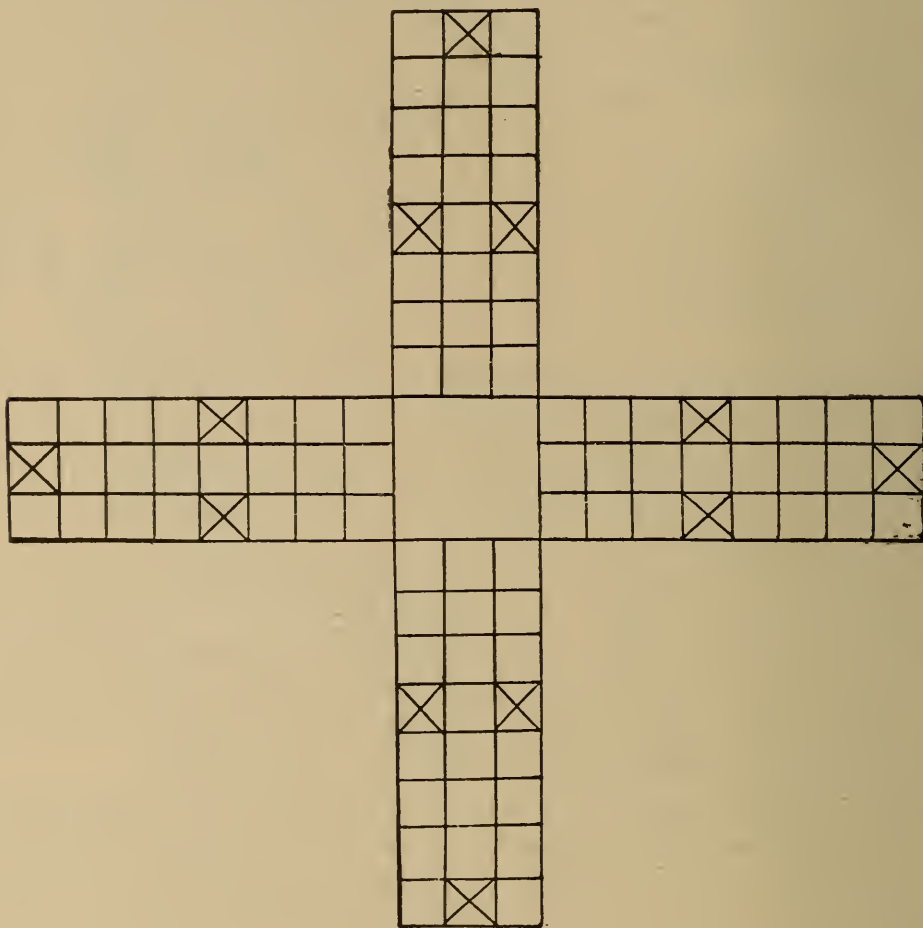


Fig. 159.

PACHISI CLOTH.

From Korean Games.

division next to the large central space. They then proceed all around the outside rows of the board, passing, of course, through those of the adversaries' rectangles, traveling from right to left (i. e., contrary to the sun) until they get back to the central row from which they started. Any piece is liable, however, to be taken up and thrown back to the beginning, as in backgammon, by any of the adversaries' pieces happening to fall upon its square, except in the case of the twelve privileged squares (called *chik*, 'forts'), which are marked with a cross; in that case the overtaking piece can not move from its position. Their

motion is determined by throwing six or seven¹ cowrie shells as dice, which count according as the apertures fall uppermost or not. The counts are as follows:

1 aperture up	= 10
2 apertures up	= 2
3 apertures up	= 3
4 apertures up	= 4
5 apertures up	= 25
6 apertures up	= 30
7 apertures up	= 12
No apertures up	= 6

A throw of twenty-five or thirty gives an additional move of one. At the last step the throw must amount to exactly one more than the number of squares left to enable the piece to go into the central space, i. e., off the board. If it happens to stop on the last square, it can not get off



Fig. 160.

MEN FOR PACHISI GAME.

a, Maldives; wood, painted. *b*, Burma; wood, painted. *c*, Lucknow, India; ivory.

Height, $1\frac{3}{4}$ inches, $\frac{1}{2}$ and $1\frac{1}{8}$ inch.

Cat. Nos. 16477, 18612, 7133, Museum of Archaeology, University of Pennsylvania.

until twenty-five or thirty is thrown. The players throw in turns, and each goes on until he throws a two, three, or four, when he loses the lead. If the same number be thrown thrice successively, it does not count. The game is generally played with six cowries, making the highest throw twenty-five (the six apertures up then counting twelve); hence it is termed *Pachisi* (from *pachis*, twenty-five). The board used is a carpet or some other fabric, ornamented and marked with cloth of different colors sewed upon it. It is sometimes played by two persons, each taking the opposite rectangles with eight pieces and playing them all from the rectangle next to him. The game continues till three of the players get out. They never play for money.”²

The game of *Pachisi* may be regarded as an expansion and elaboration of the type of game represented by the Korean *Nyout*, and sacred

¹ The number of shells used as dice in *Pachisi* and allied games varies from four up to as many as sixteen.

² Herklots, *Qanoon-e-Islam*, London, 1832.

and divinatory in its origin. The board itself represents the Four Quarters of the World. Its four arms, each with eight squares, may be regarded as the four arms of the internal cross of the *nyout* circuit, each of three points extended by the four arcs, each of five points.

The position of the "castles" or squares marked with a cross on the arms is not always the same,¹ but commonly, as on the cloth from the Maldives (No. 43), they agree with the large circles at the four quarters of the *nyout* circuit.

The colors of the men agree with those assigned to the seasons of the year and the four quarters of the world to which they correspond, in Asia. When four persons play, the red and green, and black and yellow play partners. This relation is indicated on the men used in the Burmese game (No. 42), which are painted with the complementary colors, the red men having green tips, and *vice versa*. This corresponds with the relation assumed to exist between the seasons and the world quarters and their corresponding colors. As each quarter of the world has four quarters, each player in turn has four men. As the men or pieces may be regarded in the cosmical game as actually representing men, they appear as such in the Maldivian game (No. 43) like the men of the Noah's Ark. The name of the pieces, *gôte* (singular, *gôt*),² also applied to the pawns in chess, is derived from the Sanskrit *ghotaka*, a horse. This agrees with the Korean name of the men in *Nyout: mal*, "horse," or "horsemen."

The two faces of the Korean staves, black and white, may be regarded as signifying, as will appear in the following pages, the dual principles of nature, masculine and feminine. A feminine significance is widely attributed to the aperture of the cowrie shell. Its convex side would naturally be regarded as masculine; hence its substitution for the staves would seem to have been an easy transition.

The distribution of the game of *Pachisi* in Asia, as illustrated by specimens in the U. S. National Museum and the Museum of the University of Pennsylvania, is from Syria to the Philippines.

39. PATOLLI. A game like *Pachisi*. Ancient Mexico.

Reproduction of native picture, from copy of sixteenth century Hispano-Mexican manuscript, with kind permission of Mrs. Zelia Nuttall:³

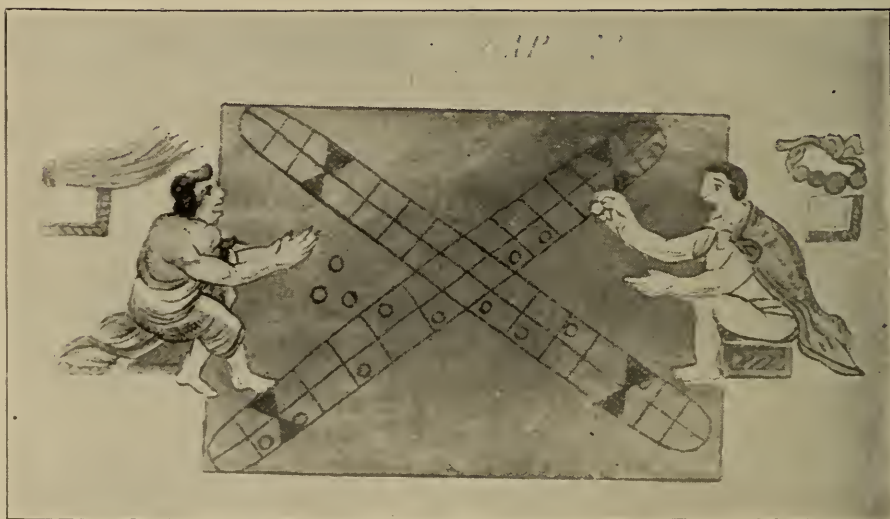
Mrs. Zelia Nuttall has kindly furnished me with the following translation of the Spanish text accompanying the picture:

This is a game that the Indians had and named *patole*. It is like a game of dice, and (played) upon a painted mat. In the following picture, and all who were mas-

¹ They are sometimes placed on the fourth square and sometimes on the fifth, varying in specimens from the same locality.

² The word *got*, or properly *ghot*, Bengali, *ghunti*, is obviously a corruption of the Sanskrit *ghotaka*, a horse, Bengali and Hindi *ghora*, or *ghote*. Communicated to the writer by the Swamee Vivikenanda through Mrs. Florence B. Sherman.

³ Prospectus: Libro de la Vida que los Indios antiguamente hazian y Supersticiones y malos Ritos que tenian y guardavan. An anonymous Hispano-Mexican Man-



THE GAME OF PATOLLI.

From Atlas of Duran's *Historia de las Indias de Nueva España y islas de tierra firme*, Mexico, 1880, II.

ters of their games, invoked a demon which they name *Macuilsucitl*, which means Five Roses (flowers). They invoke him, so that he should give them luck in winning.¹

An especial interest is attached to the game of *Patolli* from the fact of its resemblance to the Hindu *Pachisi* being regarded as one of the strongest evidences of the Asiatic origin of the old Mexican culture. Attention was first called to this resemblance by Dr. E. B. Tylor in a paper before the Anthropological Institute, entitled "The game of patolli in ancient Mexico and its probable Asiatic origin."²

In plate 29 may be seen a picture of *Patolli* from Duran's Atlas, the original being in colors.

An excellent résumé of the accounts of *Patolli*, as related by the chroniclers, is given by Prof. E. B. Tylor in the Journal of the Anthropological Institute,³ and republished in the Internationales Archiv für Ethnographie.⁴

40. CHAUSAR, or PÁSA. Set of three ivory dice.⁵ Lucknow, India.

Chausar is played upon the same board as *Pachisi*, with the substitution of three dice marked with spots counting one, two, five, and six.⁶

Either long dice (No. 13) or short ones pointed at the ends, like those here exhibited, are used.

The shorter dice are said to be used as cheaper in price. The two

uscript dating from the sixteenth century, consisting of 145 pages of illustrations and descriptive text, preserved at the Biblioteca Nazionale Centrale, Florence (Cod. Magl. Class. 111. Pal., II, Cod. 3). Published in colored facsimile with English Translation, Commentary, and Notes by Zelia Nuttall.

¹Another picture in the same manuscript, reproduced by Mrs. Nuttall, described as the *manta de cinco rosas* (Mantle of the Five Roses), suggests the attributes of this god. It consists of a parallelogram, at the four corners of which are four circles, each of the color attributed among the Mexicans to the Four Directions.

"Xochipilli, lord of flowers, otherwise named Macuixochitl, five flowers (the name of a small odorous plant), was the deity who gave and protected all flowering plants. As one of the gods of fertility and production, he was associated with Tlaloc, god of rains." Brinton, *Rig Veda Americanus*, p. 40.

²Journal of the Anthropological Institute, VIII, 1878. The first writer to discuss the resemblances of the games of the American Indians with those of the Old World, as an argument in favor of the Asiatic origin of the American race, was P. Lafitau in his *Moeurs des Sauvages Américains Comparées aux Moeurs des Premiers Temps*, Paris, 1724. Under *Des Jeux* (II, p. 338) he describes and illustrates the plum stone game played upon a mat, and the bowl game, comparing them with the similar custom of throwing cowrie shells, practiced by the negroes of Africa (see p. 815), and with knuckle bones of classical antiquity. He then compares the game of straws, *pailles*, with cards, and concludes with a parallel between the Indian ball games and those of the Greeks and Romans.

³On the Game of Patolli in Ancient Times and its probably Asiatic Origin, 1878.

⁴On American Lot-Games as Evidence of Asiatic Intercourse before the Time of Columbus, 1896.

⁵Cat. No. 7144, Mus. Arch., Univ. Penn. Chinese Games with Dice and Dominoes, fig. 25, Report U. S. Nat. Mus., 1893, p. 532.

⁶The variations in the game called *Chausar*, played with dice, from that of *Pachisi* with covies, are given by Mr. Edward Falkener. *Games Ancient and Oriental*, London, 1892.

kinds find a parallel in the long and short blocks used in the *Nyout* game and in the similar staves used in games by certain American tribes. In the case of the latter a ceremonial distinction is said to sometimes exist, one kind being used exclusively by women, who are not permitted to play with the others.

41. PASIT (*Pachisi*). Burma. Cloth, cowries, and men.¹

Cloth with four arms, each with three rows of eight squares consisting of silk cloth of different colors.

A detailed account of *Pasit* is given by Shay Yoe.² The game is also called *chuay pyit-thee* and *ansah pyit-thee*. He describes six cowries (*chuay*) being used, the throws with which count as follows:

- 1 mouth up = 10, *t'sè*.
- 2 mouths up = 2, *pah*.
- 3 mouths up = 3, *thohn*.
- 4 mouths up = 4, *lay*.
- 5 mouths up = 25, *taseht*.
- 6 mouths up = 12, *bahyah*.
- No mouths up = 6, *chouk*.

These, it will be seen, closely agree with those described on page 853, as do the rules in general. The "castles," called *poh* or *kyah*, are colored red or green. The game is also played with three dice, identical with those described under *Chausar* (No. 40).

42. DHOLA (*Pachisi*). Maldiv Islands. Cloth, men, and cowrie shells, weighted with lead, used as dice³ (Plate 30).

The cloth is made of blue cotton with the squares embroidered in white thread, with the date in the middle, A. H. 1301 (1883 A. D.). Five cowries are used. In Ceylon the men receive the name of *ito*.

43. PACHÎS (*Pachisi*). Persia.

Wooden board,⁴ composed of four pieces which fit together in the middle to form a cross (Plate 31). The face is gilded and painted in colors. There are three rows of eight squares in each arm, with pictures of women, covered with mica, at each of the four ends. It will be observed that the game is known in Persia by its Hindu name. The method of play, if it differs from that in India, is unknown to the writer.⁵

¹ Cat. Nos. 18592, 18593, 18594, Mus. Arch., Univ. Penn.

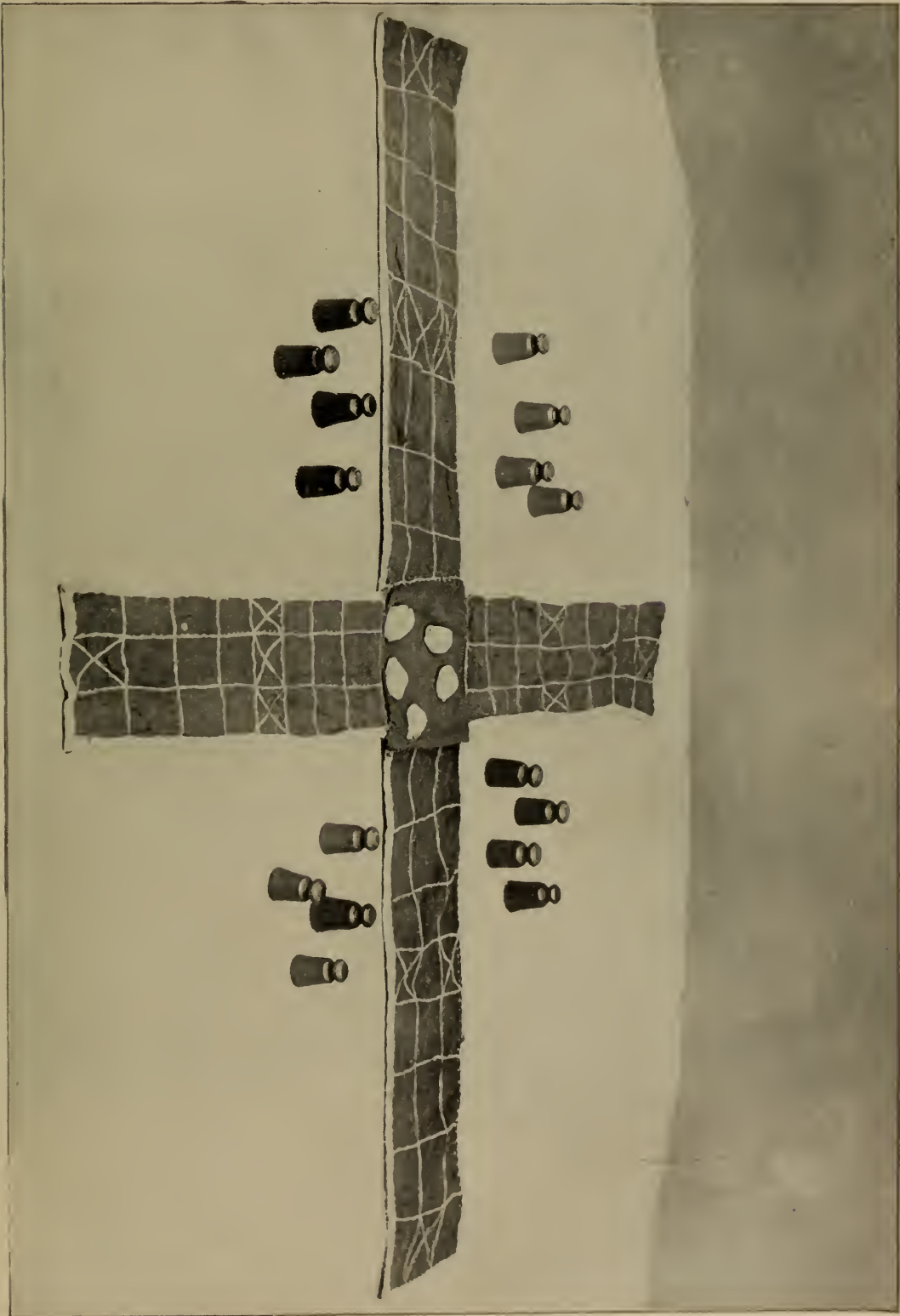
² James George Scott, *The Burman, His Life and Notions*, London, 1882, II, p. 83.

³ Cat. Nos. 16476, 16477, 16482, Mus. Arch., Univ. Penn. From the exhibit of the Government of Ceylon at the Columbian Exposition, Chicago.

⁴ Cat. No. 18264, Mus. Arch., Univ. Penn.

⁵ Gen. A. Houtum Schindler, of Teheran, in reply to a letter of inquiry, writes as follows:

"*Pachisi*, an Indian game, is seldom played in Persia; in fact, I do not remember having seen it during all my twenty-nine years' residence in the country. The Persian name of the game is *Pachîs* and *Pichâs*, the latter evidently a corruption of the former, the original Indian word."



DHOLA (*Pichisi*).

Width, 38 inches.

Maldivé Islands.

Cul. No. 16476, Museum of Archaeology, University of Pennsylvania.



BOARD FOR PACHIS (*Pachisi*).

Length, 20½ inches.

Persia.

Cat. No. 18264, Museum of Archaeology, University of Pennsylvania.

44. **EDRIS A JIN.** Edris of the Genii, a game like *Pachisi*. Druses of Lebanon, Syria. Cloth and cowrie shells used as dice and men.¹

The board is much more complicated than the preceding, consisting of a large square cotton cloth marked with a parti-colored diagram with four arms each having four rows of eight squares, each connected at the ends by a diagonal row of eight squares, the whole forming an octagonal figure. The inner square, composed of sixteen small squares, is called the *serai*. The moves are made according to the throws with four cowries. Each player has three men, other shells, one of which is called the "chief," and the others "soldiers." The former are filled with red sealing wax, to which colored paper is pasted, distinguishing them as red, green, yellow, and black. The name of the game, *Edris*, which is applied in Syria to simple games played with men upon boards, among which is *Merrels*, is the same as that of Enoch,² the prophet of the Druses.

In this game, which, from its terminology, is possibly of Persian origin, the pieces are differentiated. It appears to be a step in the direction of the game of chess, although not in the direct line.

45. **CHATURANGA.** Dice chess. Ancient India. Board, men³ (reproductions) and die.

The game of *Chaturanga*, now apparently extinct, is described in detail in the *Bhavishya Purana*, of which translations have been given by several writers. It was played upon an ordinary chessboard of sixty-four squares by four players, each of whom had eight men, distinguished by the colors red, green, yellow, and black. The men consisted of four foot soldiers or pawns, and a Rajah, Elephant, Horse, and Ship, which are placed in the order of Ship, Horse, Elephant, and Rajah, beginning from the left corner, with the four foot soldiers in front. The partners' pieces occupy the opposite diagonals. The Rajah, Elephant, and Horse move as the King, Rook, or Castle and Knight in modern chess; the Ship always two squares diagonally, hopping over an intermediate piece if necessary; the foot soldier like the pawn in our own game. The players play alternately in the order of the sun. The moves were made according to the throws with a die marked 2, 3, 4, 5. On throwing 5, the Rajah or a foot soldier was moved; if 4 was thrown, the Elephant; 3, the Horse, and 2, the Ship. It is not certain from the account referred to that the die was employed after the opening move.

The Rajah was not checkmated in this early game, but is taken like

¹ Cat. No. 18262, Mus. Arch., Univ. Penn.

² Enoch is the reputed inventor of a kind of divinatory table divided into squares, in each of which is written an Arabic letter, which is described by Lane under the name of *Za'ir'geh*. Hence, it may be, his name is applied to the games above described.

³ Cat. No. 7578, Mus. Arch., Univ. Penn.

any other piece. He might, if expedient, be captured by his partner's men, who thus placed himself in command of both armies.

The name of the game, *Chaturanga* or "four angas," is that of the four *angas* or members of an army, a term which is applied to real armies by the epic poets of India.¹

The relation of the game of *Chaturanga* to the game of *Pachisi* is very evident. The board is the square of the arm of the *Pachisi* cross, and even the castles of the latter appear to be perpetuated in the camps, similarly marked with diagonals, on the Chinese chessboard (No. 51).² The arrangement of the men at the corners of the board survives in the Burmese game of Chess (No. 46). The four-sided die is similar to that used in *Chausar* (No. 40). The pieces or men are of the same colors as in *Pachisi*, and consist of the four sets of men or pawns

of the *Pachisi* game, with the addition of the four distinctive chess pieces, the origin and significance of which remain to be accounted for. By analogy, it may be assumed that the board, if not indeed all boards upon which games are played, stands for the world and its four quarters (or the year and its four seasons), and that the game itself was originally divinatory.

The theory that modern chess had its origin in *Chaturanga*, suggested by Capt. Hiram Cox in 1799, and upheld and developed by Prof. Duncan Forbes³ has not been accepted by students of the game generally. The antiquity of

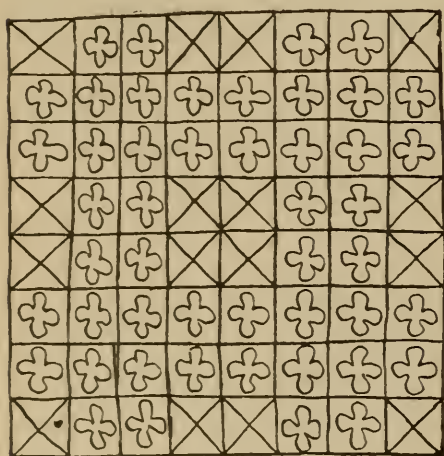


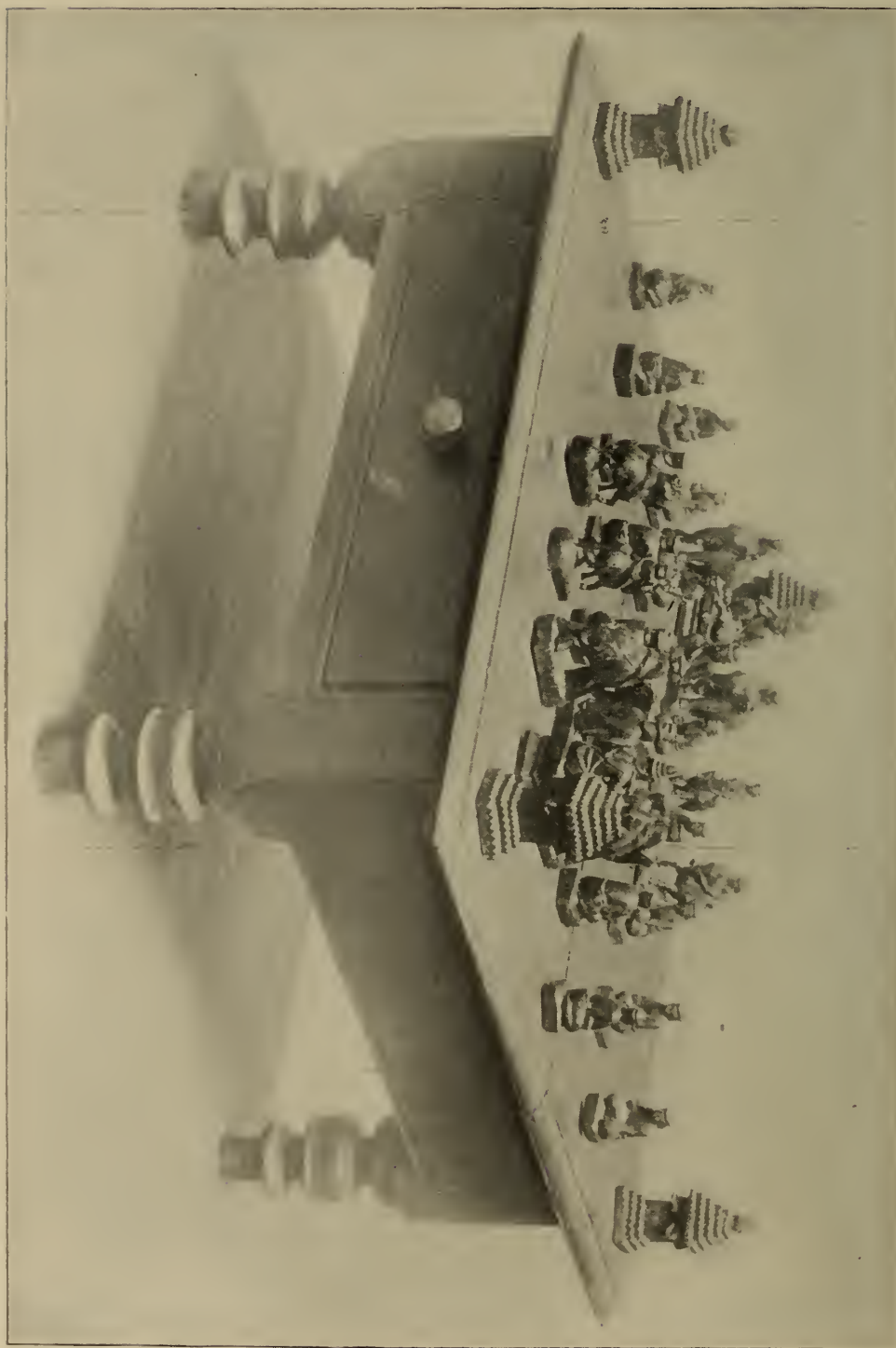
Fig. 161.
PERSIAN CHESS BOARD.
After Hyde.

the *Purana* in which it is described, has been questioned, and the game asserted to be a comparatively modern adaptation of the primal Hindu game. Apart from this discussion the relation of Chess to an earlier dice game, such as *Pachisi*, appears to be evident. The comparative study of games leads to the belief that practically all games as chess, played upon boards, were preceded by games in which the pieces were animated by dice, cowries or knuckle bones, or by staves, as in the Korean *Nyout*, the Egyptian *Táb*, and many aboriginal American games.

¹For a further account of the game with a translation of the original authorities, consult Edward Falkener, *Games Ancient and Oriental*, London, 1892, from which the above is taken.

²This survival of the Castles on the chessboard is still more clearly seen on the Persian chessboard figured by Hyde, fig. 161. He says: "The chessboard of the Persians living in India is quite square and has the same number of squares. But, in order better to protect the King, some of the squares are 'crosscut.' If now the King is hard pressed, he can evade either by changing with the Castle, or move to one of those crosscut squares." (*Historia Shahiludii*, p. 60.) A similar marking is to be observed on the Burmese chessboard.

³History of Chess, 1860.



CHESS BOARD AND MEN.

Burma.

Cat. No. 166539, U.S.N.M.

46. CHIT-THAREEN. Chess. Burma. Board and Men.¹ (Plate 32.)

The board is very large and stands high for the convenience of the players, who sit upon the ground. The men are made of wood of different colors, or of ivory painted red and green on opposite sides, and carved to represent the objects they stand for.

The pieces on each side are as follows:

- | | |
|---|------------|
| 1. <i>Meng</i> , ² King or General (1) | = King. |
| 2. <i>Chekoy</i> , Lieutenant-General (1) | = Queen. |
| 3. <i>Ratha</i> , War Chariots (2) | = Rooks. |
| 4. <i>Chein</i> , Elephants (2) | = Bishops. |
| 5. <i>Mhee</i> , Cavalry (2) | = Knights. |
| 6. <i>Yein</i> , Foot-soldiers (8) | = Pawns. |

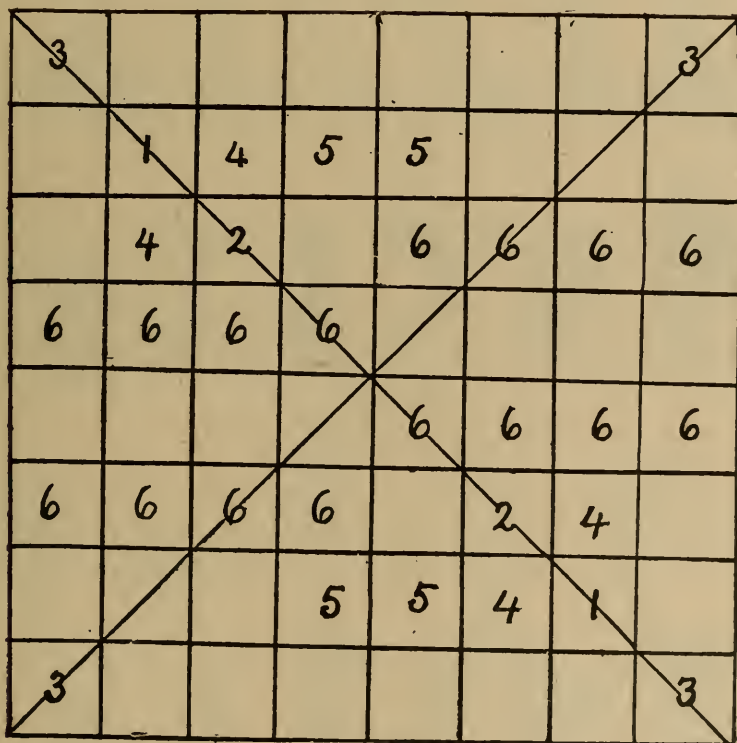


Fig. 162.

BURMESE CHESS BOARD.

From drawing in *The Burman*, II, p. 72.

The King, *Ratha* or Rooks, *Mhee* or Knights, and *Yein* or Pawns move in the same manner as the corresponding pieces in our own game. The *Chekoy* moves diagonally only, but one square at a time. The *Chein* move one square diagonally, but are able to move, but not to take, one square forward. The pieces are ordinarily arranged as shown on the board (fig. 162), but either party may adopt another line of battle.³

The absence of a queen, designated as such, will be observed in all

¹ Cat. No. 166539, U.S.N.M. Collected by Mr. C. C. Ellis, Acting United States Consular Agent.

² Mr. Scott (Shway Yoe) gives the following transliterations of the names of the pieces: *Mín*, *s'kè*, *yittah*, *sin*, *myin*, *nè*. (*The Burman*, His Life and Notions, London, 1882, II, p. 72.)

³ For a more complete account of the game, consult *Games Ancient and Oriental*.

the oriental games of Chess. Professor Forbes has pointed out that in the four-handed game of Chess it was of the utmost importance with each of the players to get possession of his ally's throne, a step which thenceforth secured to him the individual command of the allied forces.

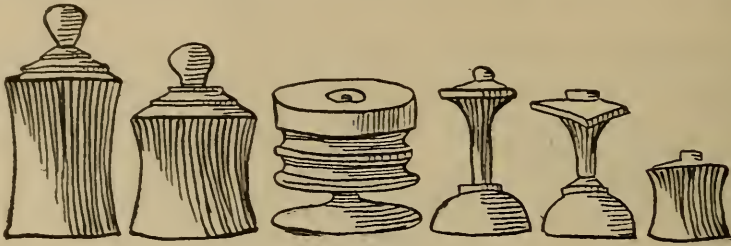


Fig. 163.
INDIAN CHESSMEN OF WOOD.
After Hyde.

It must therefore have often happened that, after some twenty or thirty moves, the contest remained to be decided between two players

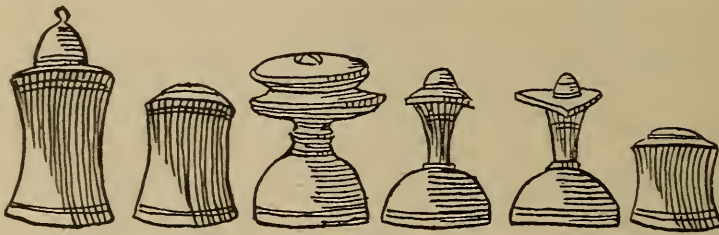


Fig. 164.
INDIAN CHESSMEN OF SOLID IVORY.
After Hyde.

only. He points out, too, that in the two-handed game one of the allied kings becomes a subordinate piece, called by the Persians and Arabs, *Farzin* or *Wazir*, the Queen of our European game.

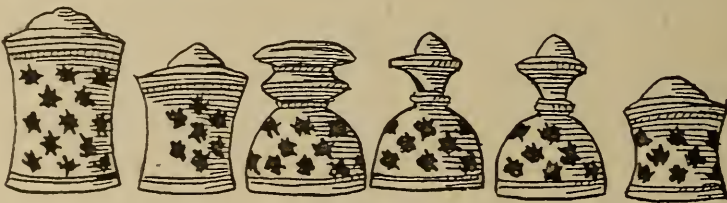


Fig. 165.
INDIAN CHESSMEN OF HOLLOW IVORY.
After Hyde.

47. CHESS. Maldive Islands. Board¹ and men.² (The men original, the board substitution.)

Identical with the Hindu game, which is played in the same manner as the English. The pieces in the Indian game receive the following names:

<i>Padshah</i> (1)	= King.
<i>Wazir</i> or Minister (1)	= Queen.
<i>Phil</i> or Elephant (2)	= Bishops.
<i>Asp, ghora</i> (2)	= Knights.
<i>Rukh, burj</i> (2)	= Castles.
<i>Piadah</i> (8)	= Pawns.

¹ Cat. No. 7579, Mus. Arch., Univ. Penn.

² Cat. No. 16489, Mus. Arch., Univ. Penn.

It may be observed that the forms of the chessmen in countries under Mohammedan influence are not usually those of men or animals, as such representations are forbidden by Mohammedan law.¹

Probably the oldest chessmen known to exist are an almost complete set which is preserved in the East Indian Museum, London. They were excavated about thirty years ago on the site of the city of Brahmunabad in Sind, which was destroyed by an earthquake in the eighth

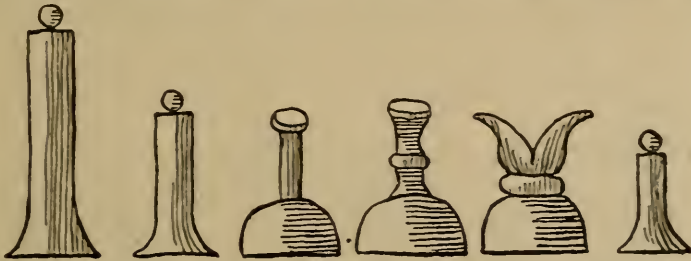


Fig. 166.
TURKISH AND GREEK CHESSMEN.
After Hyde.

century. They are black and white, made of ivory and ebony; turned, and plain in character, without ornament. The kings and queens are about 3 inches high, the pawns 1 inch, and the other pieces of intermediate heights. Fragments of a chessboard of the same materials were found with them.²

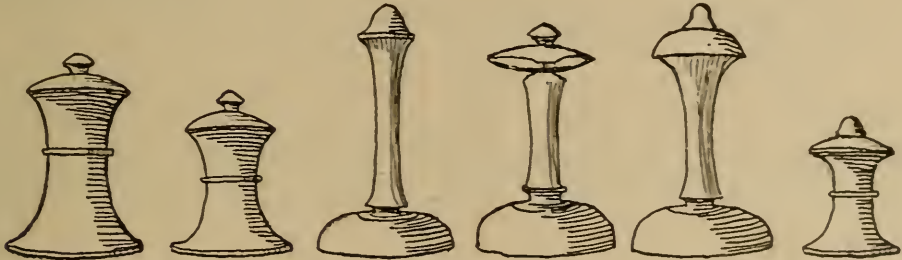


Fig. 167.
KURDISH CHESSMEN.
Height, 1 to 1½ inches.
Cat. No. 19653, Museum of Archaeology, University of Pennsylvania.

48. CHATOR. Chess. Johore, Malay Peninsula. Board and men.³

Identical with the Indian game. The pieces on each side receive the following names:

<i>Rajah</i> , (1)	= King.
<i>Muntrie</i> , Vezir (1)	= Queen.
<i>Teh</i> , Chariot (2)	= Rook.
<i>Gejah</i> , Elephant (2)	= Bishop.
<i>Kuda</i> , Horse (2)	= Knight.
<i>Bidak</i> , Foot-soldier (8)	= Pawn.

They are made of wood of two kinds, of the natural colors.

¹Some commentators have supposed that the prohibition of images in the Koran referred to chessmen, and the notion, repeated in a note to Sale's Koran, has found wide acceptance. There is no evidence that chess was known to the Arabs in the time of Mohammed.

²William Maskell, *Ivories, Ancient and Medieval*, London, 1875, p. 78.

³Cat. Nos. 16490, 16489, Mus. Arch., Univ. Penn. From the exhibit of H. H. the late Sultan of Johore at the Columbian Exposition, Chicago.

49. CHESSBOARD.¹ Morocco. Nineteenth century.

The alternate squares are made of eight-pointed stars carved in relief and painted red with a conventional flower in yellow. The depressed squares are painted yellow.

50. CHESS. England. Board and men.²

The time of the introduction of chess into Europe has not been definitely fixed upon, but is believed to be in or before the Eleventh century. The source of the European game is Arabic, which is evident



Fig. 168.

ENGLISH CHESSMEN.

Time of Caxton.

After Hyde.

from the words "check" and "mate," which are from *Shah mat*, the *Shah* or King is dead. Nothing is really known as to how chess was introduced into western and central Europe.³

¹Cat. No. 15498, Mus. Arch., Univ. Penn. Purchased by the writer in Gibraltar, Spain, 1893.

A similar board was procured by Dr. Talcott Williams in Morocco in 1897. He informed the writer that he was unable to obtain the native men, foreign chessmen being used.

²Cat. No. 7091, Mus. Arch., Univ. Penn.

³In reply to a letter of inquiry, in reference to the best modern works in English and German on the practice and history of chess, Mr. John G. White, of Cleveland, Ohio, has kindly furnished the writer with the following particulars:

The best books in English as to the practical part of the game I think to be:

E. Freeborough, *Chess Openings, Ancient and Modern*, 3d ed., 1896, supplemented by—

E. Freeborough, *Chess Endings*, London, 1891.

W. Cook, *Synopsis of Chess Openings; with American inventions in Chess Openings and fresh analysis since 1882*, by J. W. Miller, Cincinnati, 1884.

In German:

Bilguer *Handbuch*, 7th ed., Leipzig, 1891.

O. Cordel, *Führer durch de Schachtheore*, Berlin, 1888.

Dr. Eugen V. Schmidt, *Systematische Anordnung der Schacheröffnungen*, Leipzig, 1895.

As to the historic study of the game, there is nothing in the English language worthy of mention. Forbes' *History* is antiquated. He did not even make good use of the material known to him.

In German:

Dr. A. Van der Linde, *Geschichte und Literatur des Schachspiels*, two vols., Berlin, 1874; *Quellenstudien*, Berlin, 1881; *Erstes Jahrtausend*, Berlin, 1881.

Stimulated by these books, a number of articles by German scholars have appeared,

The oldest European chessmen in existence appear to be six ivory pieces, long preserved in the abbey of St. Dennis and now in the National Library at Paris, where they were transferred at the Revolution. According to tradition, they were a gift to the abbey from Charlemagne. The dress and ornaments of these pieces are in keeping with the Greek costume of the ninth century.¹

51. TSÉUNG K'í. Chess. Canton, China. Board² and men.

The board, commonly made of paper, has sixty-four squares, which are separated into two parts in the middle by a blank space, the width of one square, called the "River." Four squares in the middle of each side of the board in the first and second rows nearest the edge are crossed with two diagonal intersecting lines, marking an inclosure, which is called the "Palace." The pieces on each side, which are placed at the intersections of the lines instead of on the squares, and consist of disks of wood inscribed on both sides with the Chinese character for the name, distinguished by the colors red and blue, are as follows:

<i>Tséung</i> , "General" (1)	King.
<i>Sz'</i> , "Councillors" (2)	Bishops.
<i>Tséung</i> , "Elephants" (2).	
<i>Má</i> , "Horses" (2)	= Knights.
<i>Ch'é</i> , "Chariots" (2)	= Castles.
<i>P'áu</i> , "Cannons" (2).	
<i>Ping</i> and <i>Tsut</i> (on opposite sides), "Foot soldiers" (5) = Pawns.	

The "Generals" are placed in the middle of each outer row with the "Councillors" on either side. Next without them are the two "Horses" with the "Chariots" in the corners. The "Cannons" occupy the first points of intersection from the edges of each of the second rows, while the "Footsoldiers" are placed in the third row with one intervening point between each of them.

The "General" is not permitted to move outside of his "Palace" and only along the perpendicular and horizontal lines. The "Chancellors,"

some in periodicals devoted to the game, in learned journals, and as essays, such as that by Fritz Strohmeyer on "Chess in Old French" in the collection of essays published on the occasion of the twenty-fifth anniversary of the professorship of Dr. Adolf Tobler, Halle A. S., 1895. While these have, here and there, corrected a date, established matters doubted by Van der Linde, and enlarged the information given by him, they have left substantially unchanged the more important features of his work. Thus they have shoved back the date of knowledge of chess among the Arabs a generation, have shown knowledge of chess in Europe some fifty years before the earliest date assigned by him; proved that he spoke too quickly as to the Problem Collection of Bonus Socius comprising the whole problematical chess literature of the Middle Ages, etc. His books are somewhat disfigured by controversial bitterness, and too great critical skepticism; the style is not attractive, but they are mines of information.

¹ William Maskell, *Ivories, Ancient and Medieval*, London, 1875, p. 77.

² Cat. No. 16434, Mus. Arch., Univ. Penn.

which move along the diagonal lines, also never quit the "Palace," although other pieces may enter or pass through it. The "Elephants" move two squares diagonally, but can not jump over an intermediate piece nor cross the "River." The "Horse" has the move of our Knight, but may not jump over an intermediate piece. It may cross the "River," the "River" forming one-half of its move. The "Chariot"

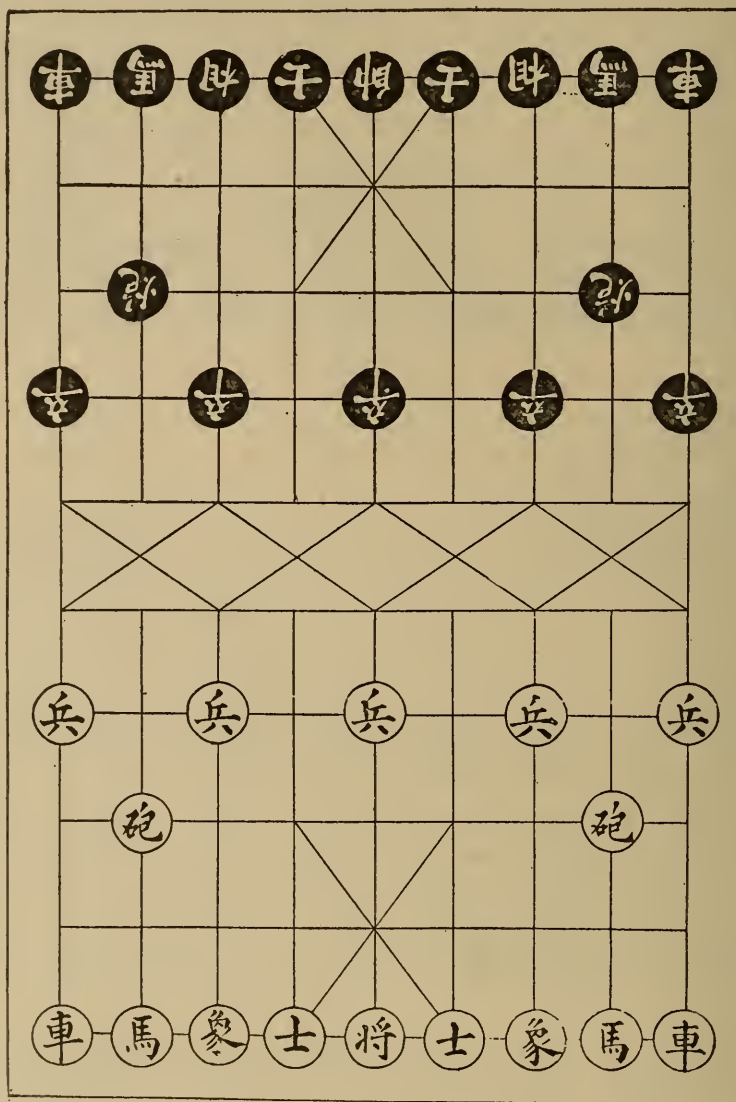


Fig. 169.

CHINESE CHESS.

From Korean Games.

moves like our "Castle," and may cross the "River." The "Cannons" move like the "Chariot," except that they can not move without jumping over one piece, but they can not jump over two. The "Footsoldiers" move and take one point at a time in a forward direction. They can cross the "River," the "River" itself being one move. When across, they can move and take either in a forward or lateral direction.

On reaching the opposite end they can move and take only laterally. The "Generals" may not face each other without intervening pieces. The object of the game is to checkmate the "General."¹

The name of the Chinese game of Chess, *Tséung k'í*, signifies the General's Game. It is regarded by them as having been invented by Wu Wang, B. C. 1169-1116, the founder of the Chow dynasty.

The name *k'í*, which is applied by the Chinese to a great variety of games played with men or pieces upon boards, appears to refer especially to the counters. "The relations of the Chinese game to the Indian game are obscure. It was probably introduced at a comparatively early time from India. The manner of placing the men, at the intersections of the lines instead of upon the squares, constitutes one of the principal points of difference."²

Himly, in discussing the origin of Chinese Chess, expresses the opinion that while the game of chess had forerunners the real game originated in India as an effigy of war, and spread from India in the sixth or seventh century to the west to Persia, and to the east to Cambodia, where, as well as in Persia, the name is evidently derived from the Sanskrit *Chaturanga* (the four army divisions). In the Chinese game the names of neither the board, the game, nor the men point to a foreign origin, nor does tradition say anything about it. Himly states that the first sure trace of chess in China occurs in the Yew kwaé lüh,³

¹ For a more detailed account, consult Games, Ancient and Oriental; and for examples of games, W. H. Wilkinson, A Manual of Chinese Chess, Shanghai, 1893.

Additional bibliography:

K. Himly, The Chinese Game of Chess as Compared with That Practiced by Western Nations, Jour. N. C. Branch, R. A. S., for 1869 and 1870, No. VI.

——, Streifzüge in das Gebiet der Geschichte des Schachspieles. Zeitschrift d. deutschen morgenländischen Gesellschaft, XXIII, p. 121.

——, Das Schachspiel der Chinesen. Zeitschrift d. deutschen morgenländischen Gesellschaft, XXIV, p. 172.

——, Anmerkungen in Beziehung auf das Schach- und andere Brettspiele. Zeitschrift d. deutschen morgenländischen Gesellschaft, XLI, p. 461.

——, Morgenländisch oder abendländisch? Zeitschrift d. deutschen morgenländischen Gesellschaft, XLIII, XLIV.

——, Die Abteilung der Spiele im Spiegel der Mandschu-Sprache. T'oung Pao.

H. G. Hollingsworth, A Short Sketch of the Chinese Game of Chess, called Kh'e. Also called Seang Kh'e, to distinguish it from Wei-Kh'e, another game played by the Chinese, Jour. N. C. Branch, R. A. S., N. S., III, December, 1866.

Thomas Hyde, Historia Shahiludii, Oxford, 1695, p. 158.

Antonius Van der Linde, Geschichte und Literatur des Schachspiels, Berlin, 1874, I, pp. 85-94.

Z. Volpicelli, Chinese Chess, Jour. N. C. Branch, R. A. S., XXIII, No. 3.

O. Von Möllendorff, Schachspiel der Chinesen, Mittheilungen der deutschen Gesellschaft für Natur- und Völkerkunde Ostasiens, II, ii.

Das schachähnliche Brettspiel der Chinesen, Deutsche Schachzeitung, Leipzig, 1891, März-Juli.

² W. H. Wilkinson, A Manual of Chinese Chess, Shanghai, 1893.

³ A. Wylie, Notes on Chinese Literature, Shanghai, 1867, p. 155.

a book containing fairy tales by Nêw Tsăng-joô, written near the end of the eighth century.

52. TJYANG-KEUL. Chess. Korea.

(a) Board and men.¹

(b) Reproduction of native picture of the game.²

Korean chess is admittedly a variant of the Chinese. The design of the board is the same, but in the Korean game the files are carried across the "River," which is, in fact, ignored. The pieces, which are

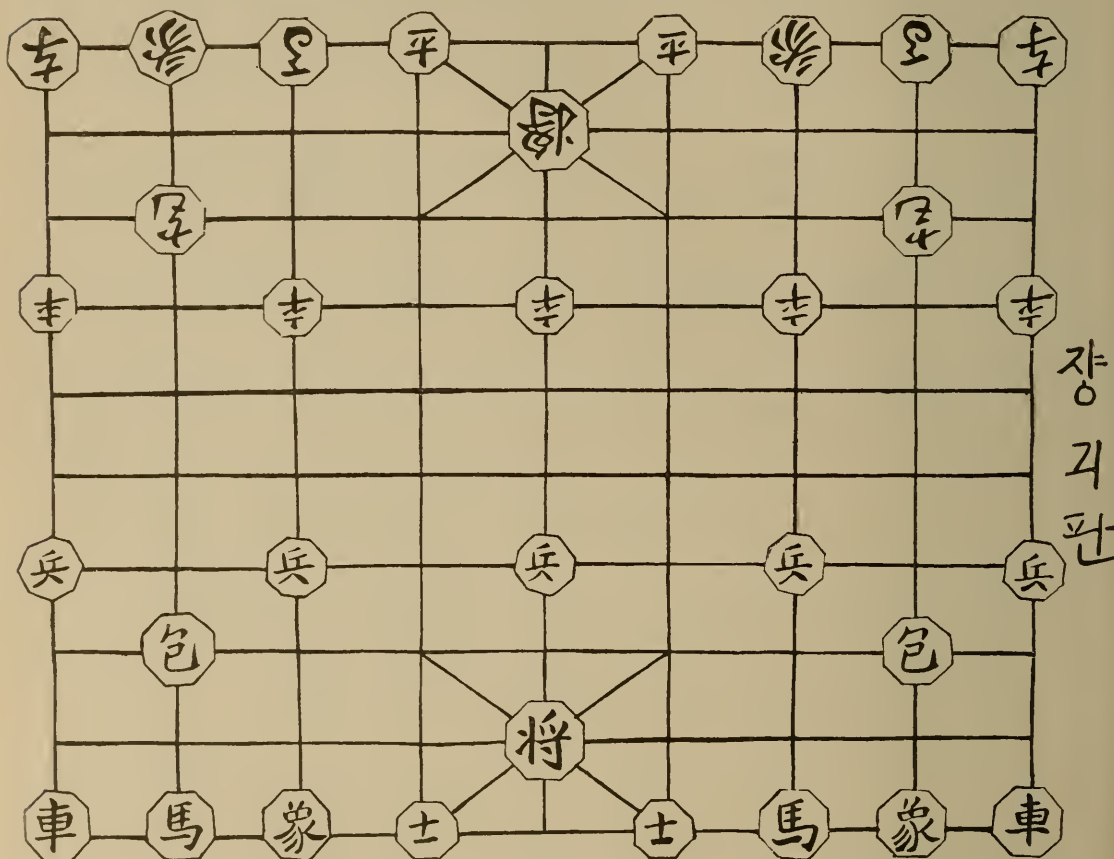


Fig. 170.

KOREAN CHESS.

From Korean Games

not circular as in China, but octagonal, and vary in size according to their value, receive the following names:

<i>Tjyang</i> , "General" (1)	= King.
<i>Să</i> , "Councillors" (2)	= Bishops.
<i>Syang</i> , "Elephants" (2).	
<i>Ma</i> , "Horses" (2)	= Knights.
<i>Tcha</i> , "Chariots" (2)	= Castles.
<i>Hpo</i> , "Cannons" (2).	
<i>Pyeng</i> and <i>tjol</i> , "Foot soldiers" (5)	= Pawns.

¹ Cat. Nos. 167565, 167561, U.S.N.M. Collected by Augustine Heard.

² From Korean Games.

For a detailed account of the game see W. H. Wilkinson in Korean Games.¹

53. SHOGI. Chess. Japan.

(a) Board² and men.³

(b) Photograph of chess players.

The Japanese chessboard consists either of a small table, on four feet, or a paper diagram. It is a square of nine or eighty-one squares, which are slightly oblong in form. The pieces are placed in the squares, not on the intersections as in China. They consist of punt-shaped pieces of wood of different sizes, lying flat upon the board, not upright, and slightly inclined toward the front; the directions of the point determining to whom the piece belongs. Unlike all other games of

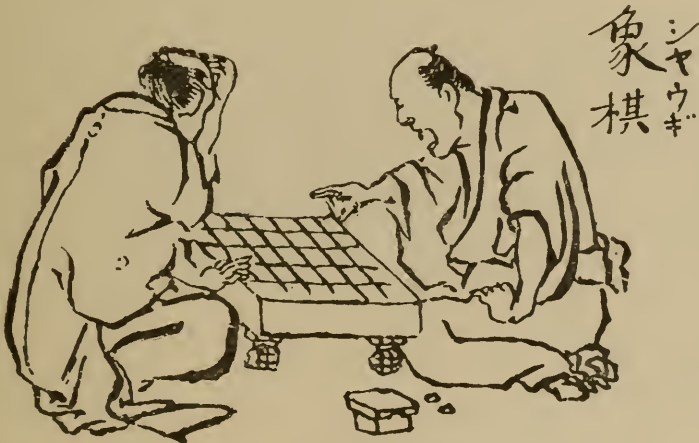


Fig. 171.

CHESS PLAYERS.

Japan.

After native drawing by Boku-sen, reproduced in Korean Games.

chess, the men are all of one color, and thus the same pieces serve for the player and his adversary. Another peculiarity is that any piece taken up may be entered by the adversary in any vacant place he chooses, and at any time he thinks desirable to enter it, such entry constituting his move. The names of the pieces on each side are as follows:

<i>O shō</i> , "General" (1)	= King.
<i>Kin shō</i> , "Gold Generals" (2).	
<i>Gin shō</i> , "Silver Generals" (2).	
<i>Hisha</i> , "Flying Wagon" (1)	= Castle.
<i>Kakkō</i> , "Angle going" (1)	= Bishop.
<i>Keima</i> , ⁴ (2)	= Knights.
<i>Kyōsha</i> , "Fragrant Chariots" (2).	
<i>Hōhei</i> , "Foot soldiers" (9)	= Pawns.

¹ Bibliography: W. H. Wilkinson, Chess in Korea, Pall Mall Budget, December 27, 1894; *Idem*, The Korean Repository.

² Cat. No. 93218, U.S.N.M. Deposited by the Corcoran Art Gallery.

³ Cat. No. 7088, Mus. Arch., Univ. Penn.

⁴ Written with the Chinese characters *kwei má*, which may be translated "honorable horse."

The *O Shō*, or "General," stands in the center of the first row. He moves one square in any direction and loses the game when checkmated. The "Gold Generals" stand on either side of the King and move one square in any direction, except the two back diagonals.

The "Silver Generals" stand on each side next to the "Gold Generals" and move one square in any direction, except sideways and backward. The *Keima* stand next to the "Silver Generals" and have our Knight's move, but only forward. The *Kyōsha* occupy the extreme ends and move any number of squares, perpendicularly only. The *Hisha* stands in front of the right-hand *Keima* and has the move of our Castle. The *Kakkō* stands in front of the left-hand *Keima* and has the move of our Bishop. The "Foot soldiers," or Pawns, occupy the third row, and move and take one square forward only.

The three rows nearest each side constitute the opposing camps. The "King" and "Gold Generals" retain their rank unchanged throughout the game, but the following pieces are promoted immediately upon entering the enemy's camp, when they are turned over, their new names being written on their reverse sides:

The *Hisha* becomes *Ryo-wo*, "Dragon King," and has the privilege, in addition to its former power, of moving one square diagonally like the *Kakkō*. The *Kakkō* becomes *Ryo-ma*, "Dragon Horse," and has the additional power of moving one square forward, sideways, or backward, like the *Hisha*. The "Silver Generals," *Keima*, *Kyōsha*, and *Hōhei*, or Pawns, can all attain the rank of "Gold Generals."¹

54. PA-TOK. Pebble Game. Korea.

(a) Board and men.²

(b) Reproduction of native picture of the game.³

The Korean game of *Pa-tok* is identical with the famous Chinese game of *Wai k'í*, or "Game of Inclosing" (*wai*, "to inclose"), which is popular in Japan under the name of *Go*⁴ (No. 56).

It is played by two players upon a board special to the game, with two sets of men of different colors (fig. 172). The board is divided into squares of uniform color, 18 by 18, numbering therefore three hundred and twenty-four. The pieces are played on the intersection of the hori-

¹ For a detailed account of the game consult *Games Ancient and Oriental*, from which the above is taken.

Additional bibliography:

Francis L. Hawks, *Narrative of an Expedition of an American Squadron to the China Seas and Japan under Command of Commodore M. C. Perry*, Washington, 1856, I, p. 465.

(Description, with drawing of board, by Dr. Daniel G. Greene.)

K. Himly, *Das japanische Schachspiel*, *Zeitschrift d. deutschen morgenländischen Gesellschaft*, XXXIII, p. 672.

V. Holtz, *Japanisches Schachspiel*, *Mittheilungen d. deutschen Gesellschaft f. Natur- und Völkerkunde Ostasiens* I, V, Heft, 10.

Antonius Van der Linde, *Geschichte und Literatur des Schachspiels*, I, pp. 94-96.

² Cat. No. 167564, U.S.N.M.

³ From *Korean Games*.

⁴ In Manchu it is called *Tonio*, and the board on which it is played *Toniko* (Himly).

zontal and vertical lines, and as there are nineteen lines in either direction, the number of places on which the men can be played is $19 \text{ by } 19 =$ three hundred and sixty-one.

The Korean board is made in the form of a small hollow table, differing from the Japanese board, which consists of a solid block of wood. In China the boards are printed on paper. The men used in Korea are small, polished, black pebbles and irregular pieces of white shell. The players place their men alternately on any of the points of intersection of the horizontal and vertical lines not already occupied, the object of the game being to occupy as much of the board as possible,

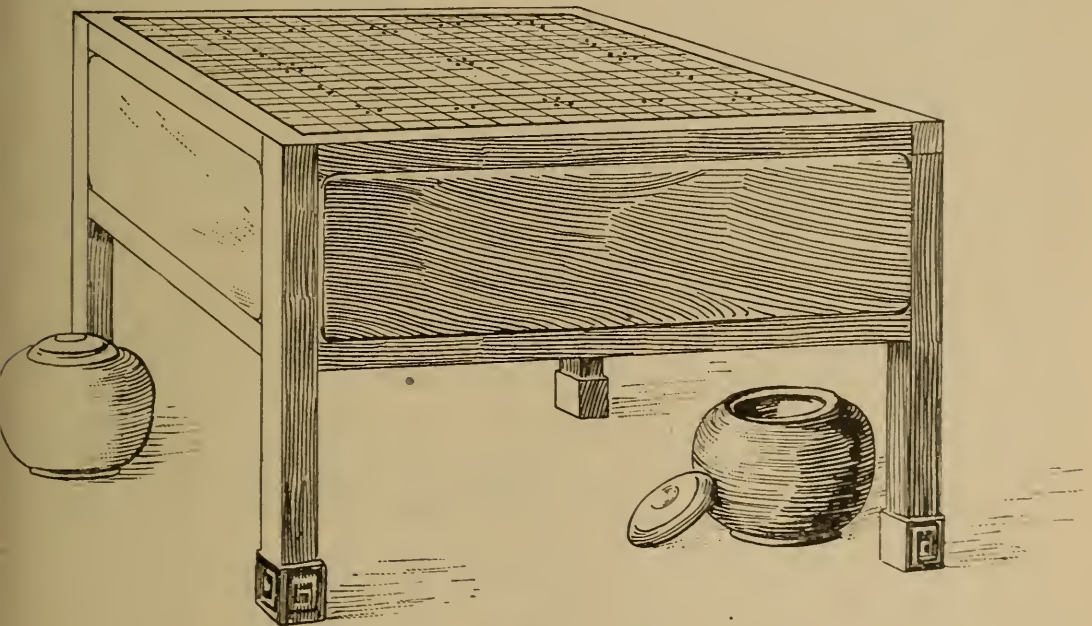


Fig. 172.

BOARD FOR PA-TOK.

Height, 11 inches; $16\frac{1}{2}$ inches square.

Korea.

Cat. No. 16431, Museum of Archæology, University of Pennsylvania.

From Korean Games.

victory being decided in favor of the player who has command of the most spots. Space can be occupied in two ways: by placing men on the different points, and by forming an inclosure with one's men, the space thus contained being reckoned as one's territory. The latter gives the Chinese name to the game.¹

The invention of the game of *Wai k'i*, of which some of the most interesting characteristics are exemplified in the Korean *Pa-tok*, is attributed by the Chinese to the Emperor Yao (B. C. 2356), or, according to other

¹ For an account of *Wai k'i*, see Z. Volpicelli, *Journal of the China Branch of the Royal Asiatic Society*, XXVI, p. 80, Shanghai, 1894; also:

Herbert A. Giles, *Wei-Ch'i; or the Chinese Game of War*, Temple Bar, XLIX, p. 194. Reprinted in *Historic China and Other Sketches*, London, 1882, p. 330.

K. Himly, *Die Abteilungen der Spiele im Spiegel der Mandchusprache*, T'oung Pao, VII, p. 135.

Thomas Hyde, *De Ludus Orientalibus*, Oxford, 1694, p. 195.

accounts, to the Emperor Shun (B. C. 2255). It is reputed as the first of games in China, Korea, and Japan, and one of the few which receive the approbation of the educated classes in those countries. Simple as the game appears, it embodies certain complex elements based upon primitive notions of the universe, which, although they may in part be secondary and late additions, are of the highest interest. Thus the pieces, black and white, are regarded as representing the night and the day; the four "angles" the four seasons, and the three hundred and sixty-one points of intersection on the board ($360 + 1$) the number of days in the year. Nine stations at the intersections, which are

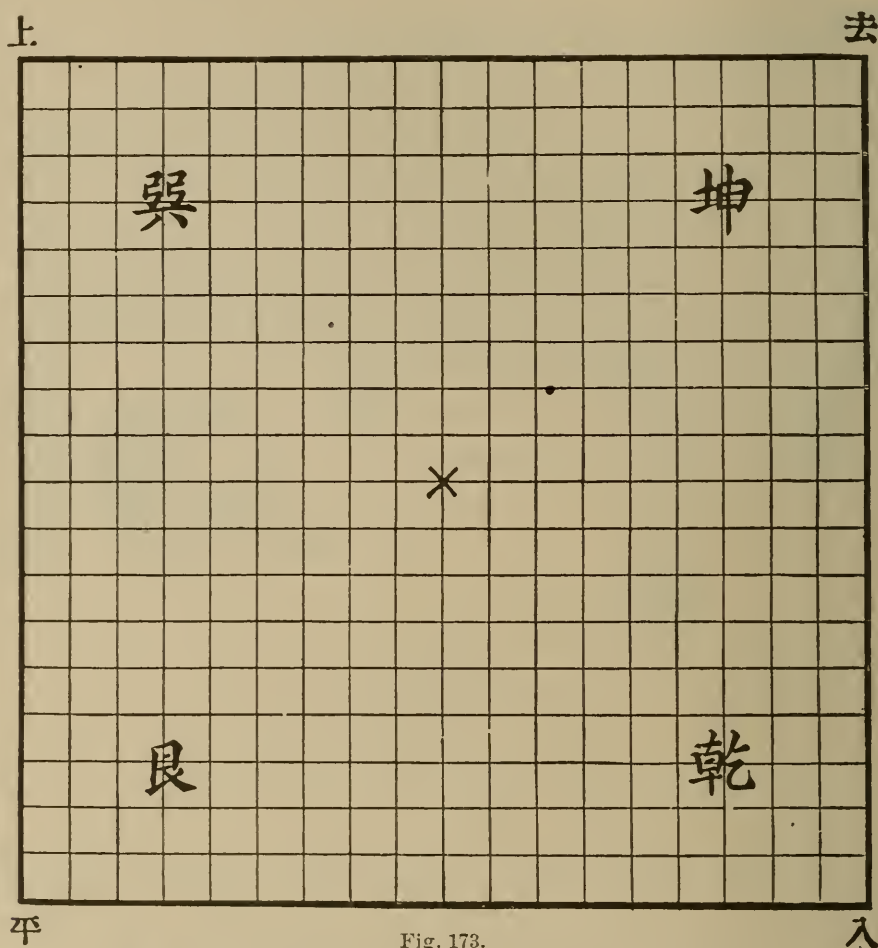


Fig. 173.

WAI K'Í BOARD, SHOWING NAMES APPLIED TO FOUR QUARTERS.

(After Volpicelli.)

marked with spots upon the board, are, in the same manner, said to correspond with the Nine Lights of Heaven (the Sun, Moon, and the seven stars of the Dipper).

The Chinese in the books which treat of the game divide the board into four equal parts, which they call "corners," and which they designate by the names of the four tones in the spoken language:

P'ing, for the lower left-hand corner;

Shéung, for the upper left-hand corner;

Hü, for the upper right hand corner;

Yap, for the lower right-hand corner.

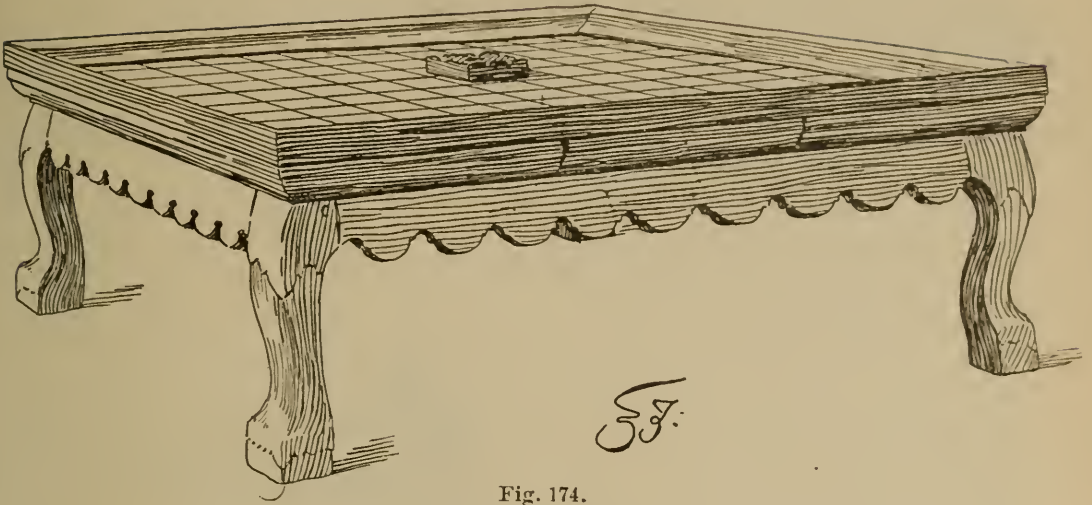


Fig. 174.

BOARD FOR CHUKI.

Height, $6\frac{1}{4}$ inches; 16 inches square.

Johore, Straits Settlements.

Cat. No. 16622, Museum of Archaeology, University of Pennsylvania.

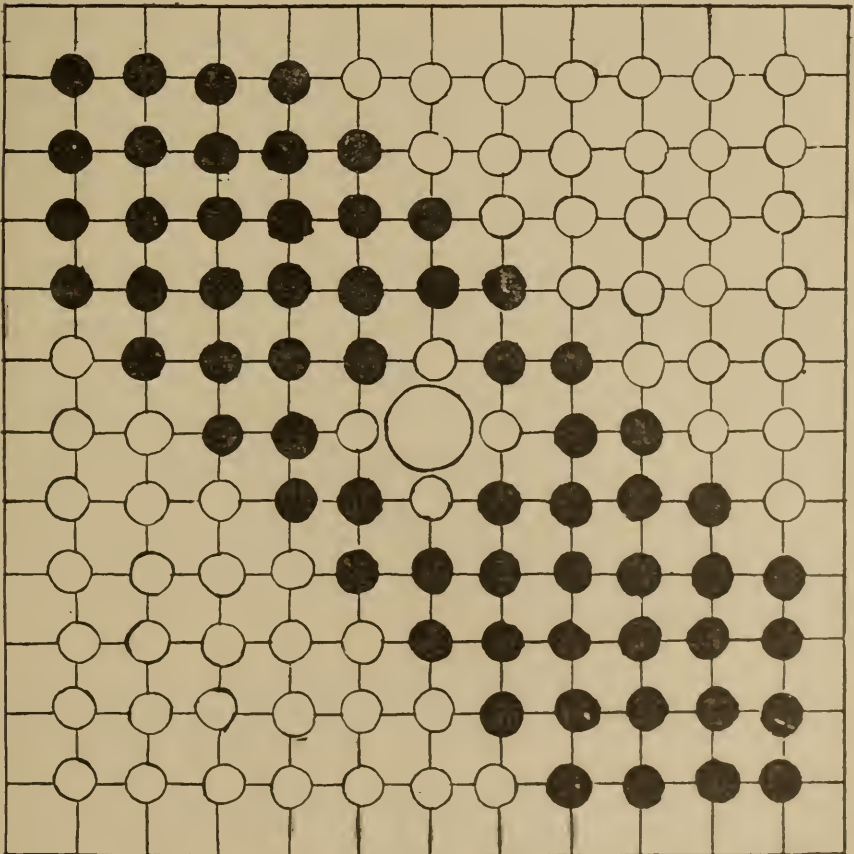


Fig. 175.

ARRANGEMENT OF MEN ON CHUKI BOARD.

In each of these four sections a place is generally marked out at a distance of four steps along the principal diagonal counted from the outer angle. Each spot is therefore equally distant from the two external sides of the section. These four points (fig. 173) are called *kan*, *sun*, *kw'an*, and *k'in*. The latter terms are the names given to the diagrams in the magic symbol of the universe, called the *Pát kwá*, or "Eight Diagrams," which stand for the directions Northeast, Southeast, Southwest, and Northwest. Like the *Nyout* circuit, this game board has a cosmical significance and represents the world. As if to more fully embody and express the relation supposed to exist between the seasons, the world quarters—all things in the universe even to the tones of the voice that distinguish the meaning of words—as well as the notes of the musical scale, two copper wires are strung within the resonant chamber of the Korean board and emit a musical note when a piece is played. In accordance with the theory I have advanced as to the origin of games played upon boards without the intervention of dice, we may expect to find intimations of their use in earlier stages of this game. Such an earlier stage may be represented in the Malayan game of *Chuki* (No. 55).

55. CHUKI. Board.¹ Johore, Malay Peninsula. (Fig. 174.)

Chuki is a game played upon a board (*papan chuki*) in the form of a small table, marked with squares, ten on a side. The four squares in

¹ Cat. No. 16622, Mus. Arch., Univ. Penn. From the collection of His Highness the late Sultan of Johore at the Columbian Exposition.

The writer is indebted to the Hon. Dato Meldrum, of Johore, Straits Settlements, for the rules of the game and a drawing of the board as set for a game reproduced in fig. 175. Mr. Charles P. G. Scott has courteously furnished the writer with the following references to the game in Malay and Javanese dictionaries.

Malay *chūki*:

"*Chuke*, name of a game resembling draughts; v. *Juki*. *Juki*, name of a game resembling draughts; v. *Chuke*." 1852, Crawford, Malay and Eng. Dict., pp. 39, 62.

"*Xūki* [= *chūki*], sorte de jeu d'échecs. *Pāpan xūki amās būah nā permāta*, un échiquier en or dont les pièces étaient faites de pierres précieuses (*S[ejārat] Mal[āyu]* [= *Chroniques malaises*, imprimées à Sincapour] 109)." 1875, Favre, Dict. malais-français, 1: 491.

"*Tjāki* [= *chūki*], soort van verkeerspel, met 2 dobbelsteenen en 52 steentjes van twee verschillende kleuren aan weerskanten, die meest van chineesch porcelein zijn [i. e. a sort of backgammon, with two dice and fifty-two pieces of two different colors on opposite sides, which are usually of Chinese porcelain]." 1880, Von de Wall and Van der Tuuk, Maleisch-Nederlandsch woordenboek, 2: 46.

"*Tjoeki*, damspel; *papan tjoeki*, dambord." 1893, Klinkert, Nieuw Maleisch-Nederlandsch woordenboek, p. 277.

Javanese *chuki*:

"*Tjoeki* [= *chuki*], soort van damspel, met honderd twintig ruiten, zestig zwarte en zestig witte stukken [i. e. a kind of checkers, with one hundred and twenty small squares, sixty black and sixty white pieces]." 1835, Roorda van Eysinga, Algemeen Javaansch en Nederduitsch woordenboek, p. 622.

"*Chuki*, *N[goko] K[rama]* [i. e. langage vulgaire et langage cérémoniel] (*une sorte de jeu de dames*)." 1875, Favre, Dict. jav.-français, p. 87.

Mr. Scott says: "I have not searched for the word outside of the Malayan languages. If I were to express an opinion on the scanty records before me, I should

the center of the board are in part occupied with a small raised square (*těmpat mangkok*, "place of bowl"), leaving one hundred and twenty points of intersection exposed, on which sixty white and sixty black men (*batu*, "stones") are arranged. Two persons play alternately, letting three dice fall in a bowl, which is set on the raised square in the middle, and taking off the board the pieces of the thrower, according to the casts.¹



Fig. 176.

GO PLAYERS (PRIEST AND WRESTLER).

Japan.

After native drawing by Boku-sen, reproduced in Korean Games.

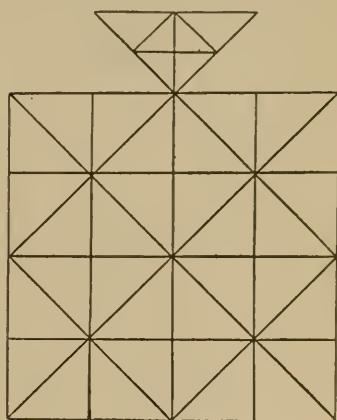


Fig. 177.

JUROKU MUSASHI.

10 by 14 inches.

Japan.

Cat. No. 7090, Museum of Archaeology,
University of Pennsylvania.

The Japanese play a similar game upon the *Go* board, covering the squares, and taking off the pieces, but without the use of dice.

56. Go. Japan. Board and men.²

The game of *Go* is regarded by the Japanese as having been intro-

say that the word and the thing are of foreign origin, very likely Chinese or Cochin-Chinese." In a subsequent communication, after comparison with the Chinese *k'í*, a generic name for games played with pieces or men, *tséung k'í*, "chess," and the Cantonese *chuk k'í*, "to play chess," he concludes that these resemblances indicate that the Malay and Javanese *chuki*, which is almost certainly of extraneous origin, is ultimately from the Chinese.

And later he sends the following entry in which the word is associated with a Chinese form in the Amoy dialect.

"*Tjuki*, 'a kind of draughts played with white and black beans' (Pijnappel, Op. cit. [Maleisch-Hollandsch woordenboek 2^e druk] I, 116); probably = Chinese *tioh ki* 'to play at draughts or chess' (Douglas, Op. cit. [Dict. of the Amoy vernacular] p. 210. Compare *Tjéki*." 1890, G. SCHLEGEL, Chinese loanwords in the Malay language, p. 14 (Extrait du, . . . T'oung pao, Archives pour servir à l'étude de l'histoire, des langues, de la géographie et de l'ethnographie de l'Asie orientale).

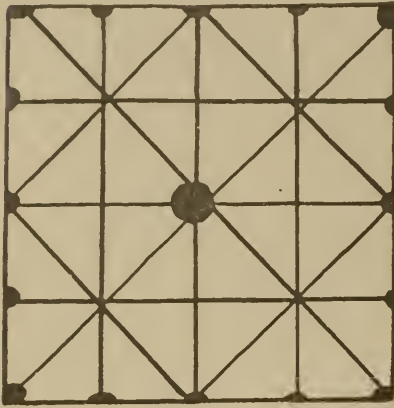
"*Tjéki* 'a kind of Chinese hazard game' (Pijnappel, Op. cit., I, 112)? Comp. *Tjuki*." 1890, G. SCHLEGEL, Op. cit., p. 13.

¹ It will be observed that in this game the number of points are $(60 \text{ by } 2) + 1 = \text{one hundred and twenty-one}$, while on the *Pa-tok* board there are $(60 \text{ by } 6) + 1 = \text{three hundred and sixty-one squares}$.

² Cat. Nos. 93220, 93221, U.S.N.M. Deposited by the Corcoran Art Gallery, Washington.

duced into that country from China. The exact date is not known, but it is usually attributed to the eighth century A. D. It is a great favorite at the present day in Japan,

especially among military men, being regarded as furnishing instruction in the art of war.¹



ハヤスカ
道行成
ムサシ

Fig. 178.

JUROKU MUSASHI.

Japan.

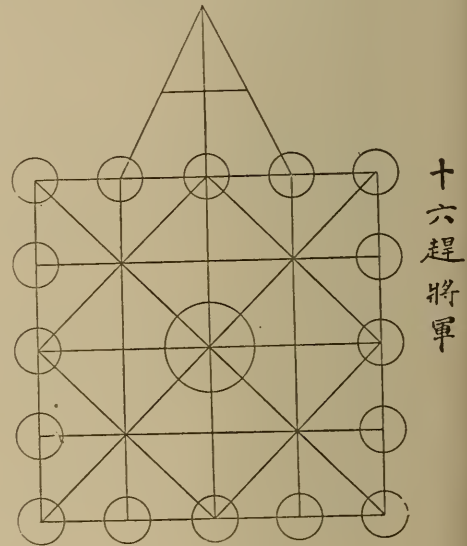
From the *Wa kan san sai dzu e*, reproduced in *Korean Games*.

in Japan there is a triangle at the top of the board two squares wide, with its apex resting upon the middle of the upper side. Sixteen men (*musashi*, "soldiers") are arranged at the sixteen points of intersection at the sides of the square with the *Taisho*, or General, in the center. Two play, the "General" striving to capture the "Soldiers," and the latter to block him.

The board and men appear to be an expression of the same cosmical ideas as are found in the game of *Nyout*, there being four men associated with each side of the square. The traditions of the game still more closely identify it with the Korean *Nyout*.

A Chinese form of the game is figured and described by Dr. Karl Himly⁴ under the name of *Shap luk kon tséung kwan*, or "The Sixteen Pursue the Commander" (fig. 179).

The board, he says, is seen in the streets, where the players—laborers,



十六趕將軍

Fig. 179.

SHAP LUK KON TSÉUNG KWAN.

China.

After Himly.

¹ O. Korscheld, *Das Go-Spiel*, Mittheilungen d. deutschen Gesellschaft für Natur- und Völkerkunde Ostasiens, III, pp. 21-24.

² Cat. No. 7090, Mus. Arch., Univ. Penn.

³ Cat. No. 17832, Mus. Arch., Univ. Penn.

⁴ Anmerk. in Beziehung auf das Schach- u. andere Brettspiele, Zeitschrift d. deutschen morgenländischen Gesellschaft, XLI, p. 469.

children, etc.—scratch it on the ground and use potsherds, etc., for pieces. The triangle bears the somewhat irreverent name of *mau ts'z* (privy).

A variant of this game is figured by Hyde¹ (fig. 180), played upon a board with 5 by 9 rows, with twenty-eight pieces, one of which, the *tséung kwan*, or “Commander,” is placed in the center. The name he has transcribed in Chinese characters as *yeung luk sz' kon tséung kwan*.

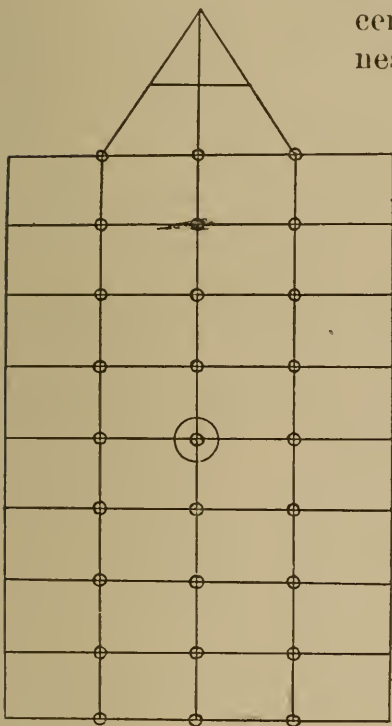


Fig. 180.

LUDUS DE SUBJUGANDI REBELLES.

China.

After Hyde.

楊
六
四
趕
將
軍

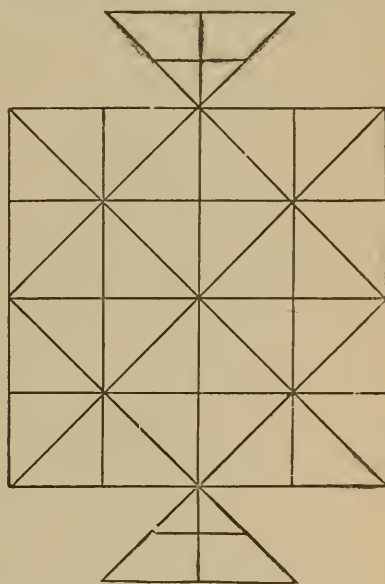


Fig. 181.

TIGER GAME.

Board, 12 by 20 inches.

Johore, Straits Settlements.

Cat. No. 16385, Museum of Archaeology,
University of Pennsylvania.

58. DAM HARIMAN. Board for “Tiger Game,”² the Malayan Game of Fox and Geese.

Unpainted board, 12 by 20 inches, inscribed with diagram (fig. 181). The lines are incised in the wood and the board raised by two strips of wood nailed transversely across the bottom.

Identical with the Hindu game, described by Herklots,³ under the name of *Mogol Putt'hān*⁴ (Mogul Pathan), that is, Mogul against Pathan.

¹ De ludo subjugandi rebelles, De Ludis Orientalibus, p. 215.

² Cat. No. 16385, Mus. Arch., Univ. Penn. From the collection of His Highness the late Sultan of Johore at the Columbian Exposition.

³ Qanoon-e-islam, Appendix, LIII.

⁴ Another common Hindu game, said to be known throughout India, is called *Pulijudam* or “tiger game.” Three “tigers” are placed on the board (fig. 182) at the points indicated by black spots. The other player has fifteen “lambs,” which he lays down at the points of intersection, one by one, alternating with the move of a tiger. The tigers endeavor to jump over and kill the lambs, and the latter to pen in the tigers.

In Peru a similar game is played on a board (fig. 183) under the name of *Solitario*. In Mexico a corresponding game (fig. 184) is called *Coyote*.¹

In Siam we find the game of *Sua ghin gnua*, or "Tiger and Oxen" (fig. 185), and in Burma, *Lay gwet kyah*.

There are three big tigers and eleven or sometimes twelve little ones. The object is for the big tigers to hunt down on a draft board and eat the little ones. If, however, the cubs can corner the big ones and prevent them from taking a leap, the latter have to succumb.²

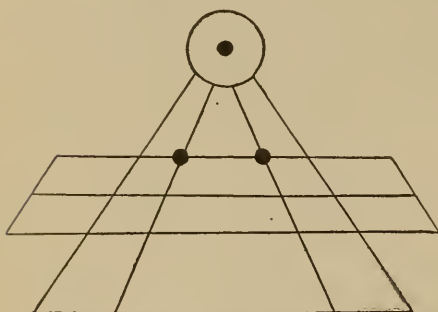


Fig. 182.

TIGER GAME (*Pulijudam*).

India.

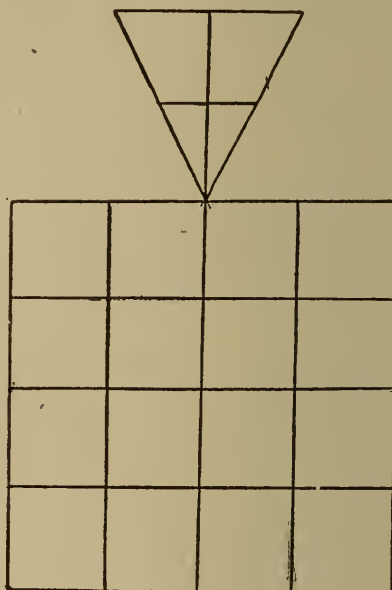


Fig. 183.

SOLITARIO.

Peru.

The Samoan men at the Columbian Exposition at Chicago described a native game to the writer under the name of *Moo*. It was played with pebbles upon the squares of a mat by two persons. One had a

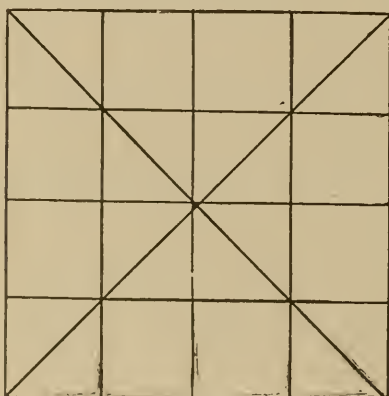


Fig. 184.

COYOTE.

Mexico.



Fig. 185.

SUA GHIN GNUA.

Siam.

number of white stones, the other a black piece. The rules appeared to be the same as Fox and Geese. In Hawaii, Mr. James Jackson

¹ A modern printed sheet for the Juego del Coyote from Mexico in the University Museum (Cat. No. 16384) bears a diagram identical with the game of Fox and Geese (fig. 186). The rules given are the same.

² The Burman, II, p. 83.

Jarves speaks of Konane, "an intricate game of draughts played with colored stones upon a flat stone ruled with a large number of squares."¹

In Madagascar, Sibree² describes a game resembling draughts as a very common pastime. It is played with pebbles or beans on a board or piece of smooth stone or earth having thirty-two divisions or holes, much in the same way as the game of Fox and Geese.

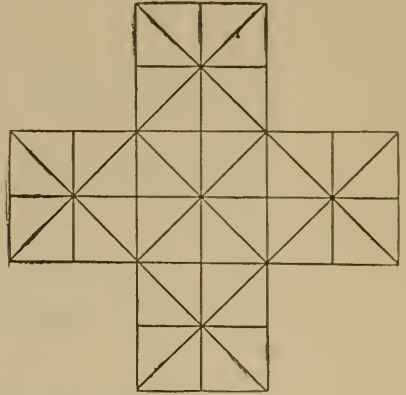


Fig. 186.
FOX AND GEESE.
United States.

59. FOX AND GEESE. United States, 1876.
Paper diagram.³ (Fig. 186.)

60. A-WI-THLAK-NA-KWE. "Stone Warriors." Zuñi Indians. New Mexico.
Diagram of board and set of men.⁴

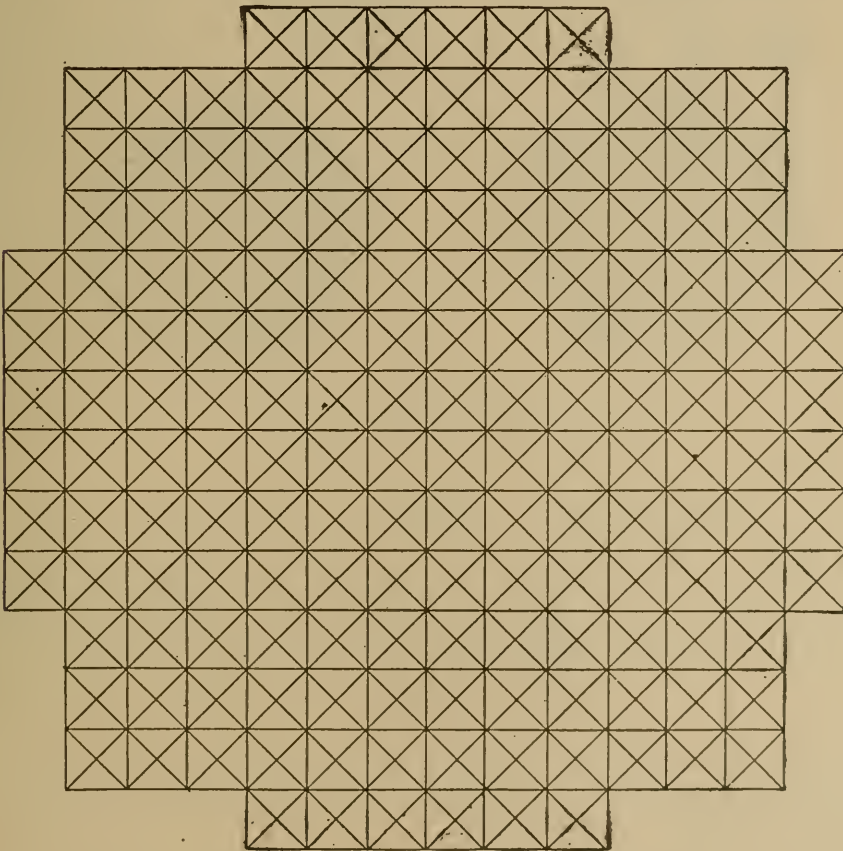


Fig. 187.
GAME OF STONE WARRIORS.
Zuñi Indians, New Mexico.
Drawing furnished by Mr. Frank Hamilton Cushing

¹ H. Carrington Bolton, Some Hawaiian Pastimes, Jour. Am. Folk-lore, IV, p. 22.

² James Sibree, jr., Madagascar and Its People, p. 352.

³ Cat. No. 17577, Mus. Arch., Univ. Penn.

⁴ Cat. No. 16550, Mus. Arch., Univ. Penn. Reproductions made by Mr. F. H. Cushing, who furnished the account of the game.

the opening of the game each player places six men in the center of the six squares at his side of the board. The latter usually consists of a slab of stone pecked with the diagram (fig. 187). The men consist of disks of pottery about 1 inch in diameter, made from broken vessels, those upon one side being distinguished by being perforated with a small hole, while those of the other side are plain. The object of the game is to cross over and take the opponent's place, capturing as many men as possible by the way. The moves are made one square at a time along the diagonal lines, the pieces being placed at the points of intersection. When a player gets one of his opponent's pieces between two of his own it may be taken, and the first piece thus captured may be replaced by a seventh man, called the "Priest of the Bow," which

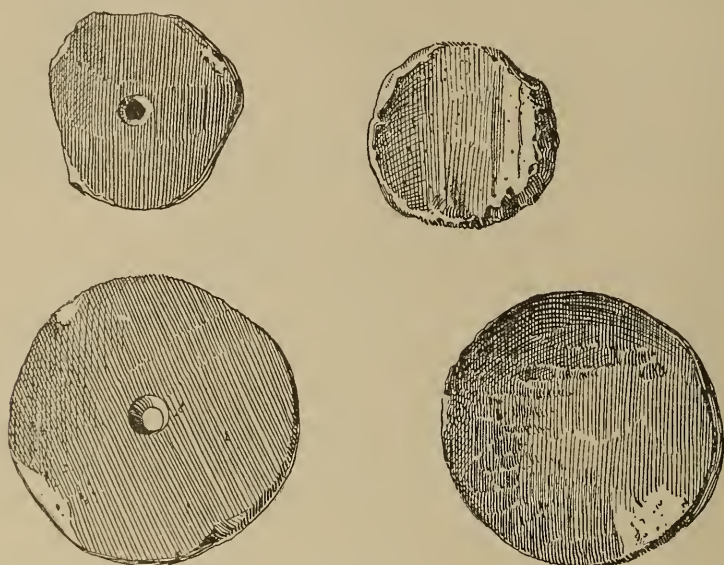


Fig. 188.

POTTERY DISKS USED AS MEN IN GAMES.

Diameters, $1\frac{1}{4}$, 1, and $1\frac{3}{4}$ inches.

Cliff dwellings, Mancos Canyon, Colorado.

Cat. Nos. 23556-23559, Museum of Archaeology, University of Pennsylvania.

may move both on the diagonal lines and on those at right angles. A piece may not be moved backward. When four persons play, those on the North and West play against those on the South and East.

VOCABULARY.

The board, *A te a lan e*, "stone plain."

The straight lines, *a kwi we*, "Canyons," or "arroyas."

The diagonal lines, *O na we*, "trails."

The ordinary men, *A wi thlak na kwe*.

The seventh piece, *Pi-thlan shi-wani* (*Mósóná*), "Priest of the Bow."

The latter piece by power of magic is enabled to cross the canyons. The game is commonly played upon housetops, which are often found marked with the diagram. The game, or something similar to it, was widely distributed among the Pueblo Indians of the Southwest, as is shown by the numerous pottery disks, which were used for it

found among the ruins. Its antiquity is attested by the presence of such disks among the remains in the cliff houses. Four such disks from Mancos Canyon, in the University Museum, are shown in fig. 188.¹

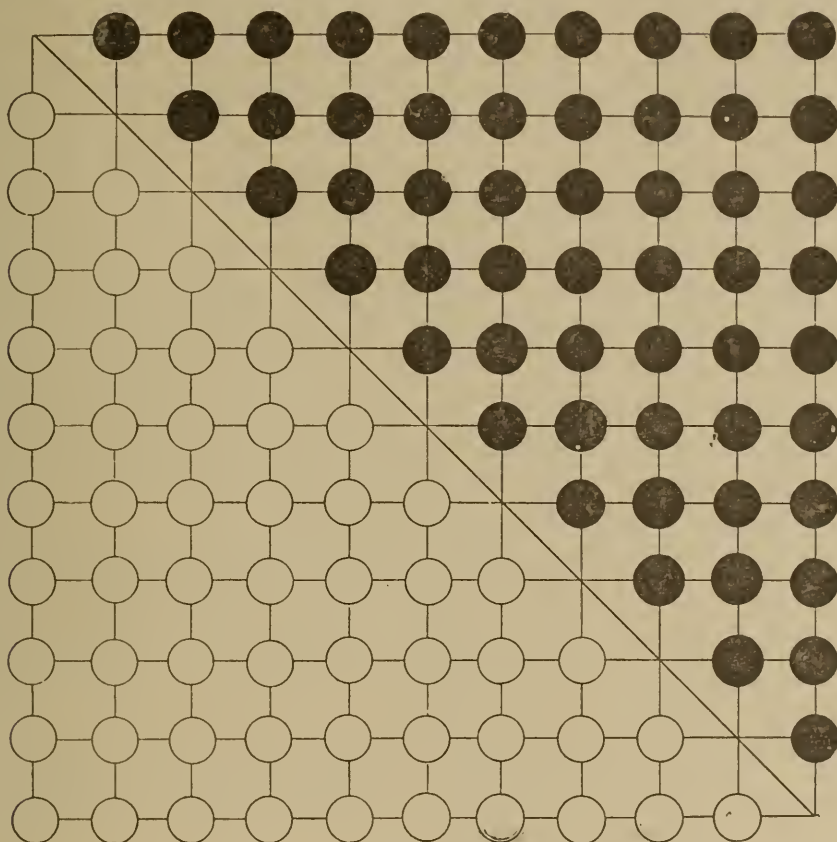


Fig. 189.

THE GAME OF TO-TO-LÓS-PI.

Moki Indians, New Mexico.

After an unpublished drawing by Dr. J. Walter Fewkes.

Dr. J. Walter Fewkes² has described a somewhat similar game as existing among the Moki Indians of New Mexico under the name of *To-to-lós-pi*. It can be played by two or more parties. A rectangular

¹Disks roughly shaped from fragments of earthenware vessels were found by Mr. Clarence B. Moore in mounds of the Georgia Coast (Jour. Academy of Natural Sciences, Phila., XI), of which specimens contributed by him are contained in the Museum of Archaeology of the University of Pennsylvania (Cat. Nos. 20160-20162). They vary from 1½ to 2 inches in diameter. Similar pottery disks, some perforated, are found in many localities in the United States. Mr. G. E. Laidlaw writes that large numbers of disks of stone and pottery are found in the ash beds of ancient village sites in Ontario, Canada, east and northeast of Lake Simcoe. They are seldom bored, and the pottery disks, which range from 1 inch to 2 inches in diameter, are made from shards, and have the original curve of the pot. They bear no markings, and in a great majority of cases the edges are not ground smooth. He suggests their probable use in games. Pottery disks, all made from shards, some with central perforations, are found in Peru, Bolivia, and Argentina, and doubtless other South American sites.

²Journal of American Ethnology and Archaeology, II, p. 159.

figure (fig. 189), divided into a large number of squares, is drawn upon the rock, either by scratching or by using a different colored stone as a crayon. A diagonal line, *túh-kí-o-ta*, is drawn across the rectangle from northwest to southeast and the players station themselves at each end of this line. When two parties play, a single person acts as player and the other members of the party act as advisers. The first play is won by tossing a leaf or corn husk with one side blackened. The pieces which are used are bean or corn kernels, stones and wood, or small fragments of any substance of marked color. The players were stationed at each end of the diagonal line, *túh-kí-o-ta*. They move their pieces upon this line, but never across it. (On this line the game is fought.) The moves which are made are intricate, and the player may move one or more pieces successively. Certain positions entitle him to this privilege. He may capture, or, as he terms it, kill one or more of his opponents at one play. In this respect the game is not unlike checkers, and to capture the pieces of the opponent seems to be the main object of the game. The checkers, however, must be concentrated and always moved toward the southeast corner.¹

This game is now rarely played on the East Mesa, but is still used at Oraibi. It is said to have been played in ancient times by the sun and moon or by other mythical personages. Figures of this game formerly existed on the rocks near the village of Walpi, and may be the same referred to by Bourke.

Games resembling the above seem to have existed widely among the American tribes. Mrs. W. W. Brown² gives the following account of a game of the Wabanaki Indians:

Ko-ko-nag'n has a resemblance to the game of Checkers, but, although nearly all are more or less proficient at the latter game, there are only a few who understand *ko-ko-nag'n*. This, unlike any other game, may be played by male and female opponents. It is the least noisy, the skillful play requiring deliberation and undivided attention. A smooth surface is marked off into different-sized spaces, and pieces of wood, round and square, marked to qualify value, are generally used, though sometimes carved bone is substituted.

This may be the game referred to by Rasle among the Norridgewok Indians, where he says: "*Un autre jeu où l'on place des grains sur des espèce de lozanges entrelassées (dicitur) maïmadöaïgaï.*"

¹ It would appear from Dr. Fewkes's sketch of the board that only one player moved toward the southeast and that his opponent went in the opposite direction.

² Some Indoor and Outdoor Games of the Wabanaki Indians, Trans. Roy. Soc. Canada, sec. II, 1888, p. 41.

The other principal class of arrow-derived games is that in which a number of staves, splints, or other substituted objects are shaken or divided at random, originally to determine *place* directly, or to discover the *number* and thence the *place*. Like the preceding class, it is widely distributed throughout the world. The divinatory associations of these games are more clearly manifest to the writer than those in which the tossed staves or their substitutes are used, and the derivation of the implements from arrows more easily demonstrable.

An examination of the arrows used by savage people shows that the custom of marking them in such manner that each individual might distinguish his own was very general. From this, both in the Old and the New World, the arrow came to stand as the token and symbol of a man,¹ and as such, among many other symbolic uses, was employed in divinatory games. It appears that the marks of the arrows of the American Indians, which are placed upon the shaftments, refer not, it would seem, to the personal names of their owners, but to their owners' place in the system of classification according to the directions in the circuit of the clans. At a later period of development we find these cosmical marks replaced by the written name of the owner, as in Eastern Asia. Traces still survive, even here, as on the practice arrows of Korea (No. 78) of the earlier system.

The method of marking in America is by means of colored bands (ribbons) painted upon the shaftments. It may be assumed that a quiver made up of the different arrows of the individuals of a tribe would represent the Four Quarters and the intermediary points. It is such perfect quivers and their conventionalized representatives that constitute the implements of magic employed in the games which follow. In connection with these there are exhibited several series of arrows, together with a variety of objects regarded by the writer as having been derived from the employment of arrows as symbols of personality.

61. TONG-KAI. Korea.

(a) Quiver of Ceremonial Arrows.² Worn as an emblem of rank by Korean officials in military court-dress.

¹ The symbolism of the arrow was discussed by Mr. Cushing in his vice-presidential address before Section H of the American Association for the Advancement of Science, Springfield, 1895. According to him, "owner's marks, on arrows, were not designed primarily as signs of mere possession. They were indicative, rather, of the place in the cosmically arranged circuit of the tribe, of the man who made and possessed the arrows. It is probable that such marks were at first placed on arrows to serve as protective and directive potencies. By imparting somewhat of the man's personality to the arrows, their special aid to him was insured and at the same time their flight was endowed with the breath or wind of the quarter to which he and they alike belonged. It naturally followed that, much as his face was recognizable as belonging to him, so were these arrows recognizable as essentially of his place and of him—so much so, that ceremonially they often stood for the man himself even more intimately than do our signatures stand for us." But the second part of this highly important paper, in which this was embodied, remains unpublished.

² Cat. No. 151147. U.S.N.M. Collected by Hon. W. W. Rockhill.

(b) Reproduction of native picture of Korean officials in military court-dress wearing quiver with arrows.¹

The quiver exhibited has ten arrows, while in the native picture five arrows are represented as being worn. These are regarded by the writer as corresponding with the Five Directions, and as symbols of regnal or universal authority.² They are worn by the King himself, as well as officers who receive orders from him. The actual arrows are 26 inches in length, made of lacquered bamboo with white feathering and no points. The quiver is of Japanese leather ornamented with silver disks and sewed along the edges with colored silk.³

Chinese generals wear (or wore) a set of six arrows as an insignia of rank. A set of such arrows (Cat. No. 17686) in the Museum of the University, picked up in August, 1894, on the field of A-San in Korea, three days after the battle, by Dr. E. B. Landis, are six in number (fig. 190). The shafts are of white wood, 37 inches in length, feathered with two



Fig. 190.

CEREMONIAL ARROW.

Insignia of Chinese general.

One of set of six, inscribed with names of twelve "branches."

Length, 42 inches.

Cat. No. 17686, Museum of Archaeology, University of Pennsylvania.

feathers and painted with a red ribbon on the shaftment and at the nock. The points are of iron, leaf-shaped and painted black, and are fastened in the shaftment with a wrapping of cherry-bark. They are painted in red with the twelve characters which stand as names for the Twelve Branches or Duodenary Cycle.⁴ These signs are used to

¹ Korean Games.

² The flag of a Chinese general in the University Museum (Cat. No. 16843) consists of five vertical stripes, of green, yellow, black, white, and red, the colors of the East, Middle, North, West, and South.

³ Walter Hough, Korean Collections in the National Museum, Report U. S. Nat. Mus., 1891, p. 481.

⁴ Used in connection with the Ten Stems to form a cycle of sixty combinations employed by the Chinese from remote antiquity for the purpose of designating successive days, and, since the Han dynasty, applied to the numbering of years. Twelve animals: Rat, Ox, Tiger, Hare, Dragon, Serpent, Horse, Goat, Monkey, Cock, Dog, and Pig are associated with the Twelve Branches, and are believed to exercise an

indicate the twelve points of the Chinese compass, *tsz'* corresponding to the North, *máu* to the East, *ng'* to the South, and *yau* to the West. From this peculiarity it is not improbable that these arrows were originally intended for divinatory purposes.

62. P'AI TS'IM. "Notice Tally."¹ (Fig. 191.) Chinese in the United States.

Tally used to assemble members of the Chinese gamblers and shop-keepers' guild in Philadelphia. In common use for similar purposes in China, where bamboo instead of varnished wood is used. This tally bears on one side the name of the gamblers' guild, and on the other the name of one of its members, with a blank for the insertion of the hour of the meeting, as occasion requires. The tallies are kept by a member of the guild, who summons the members by sending each his tally. This constitutes the credentials of the person bringing it to the meeting.

These tallies are direct descendants of the arrows used in more primitive conditions for the same purpose. Their name, *ts'im*, is almost identical with the Chinese name for arrow, and their form still retains a suggestion of their origin. Compare with the tallies used in the game of *Chong ün ch'au* (No. 27).

63. NIN KÁN. New Year Cards. Chinese in the United States and China.

Rectangular strips of red paper, $4\frac{1}{2}$ by 9 inches, twice folded, and bearing personal names and names of shop companies. Widely exchanged at the New Year season, when they are unfolded and pasted in a row in the shop or dwelling, where they are kept during the year.

These cards may be regarded as belonging to the same family as the message tally, or arrow, with the name of a man. Like it they ceremonially stand for the individual whose name they bear, and as such are preserved as pledges and tokens, given each other by members of the same clan and their friends, for the year. The name *kán* means primarily a slip of bamboo "formerly used for making notes on."

Comparable with the "year cards" are the *ho-hpai* (Chinese, *hò p'ái*) or "name tablets," which all the male inhabitants of Korea are required by law to carry.

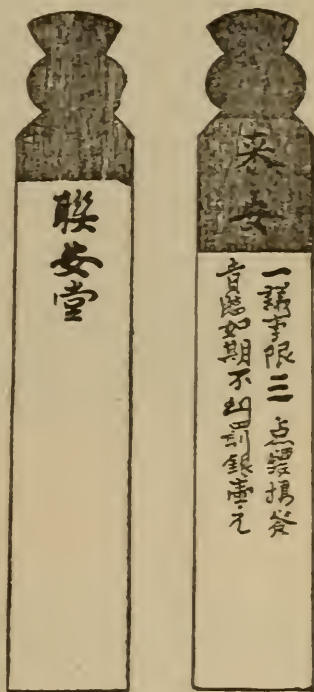


Fig. 191.

NOTICE TALLY (*P'ai ts'im*).

Length, $8\frac{1}{2}$ inches.

Chinese in United States.

From Korean Games. Cat. No. 15415.
Museum of Archaeology, University
of Pennsylvania.

influence, according to the attributes ascribed to each, over the hour, day, or year to which, through the duodenary cycle of symbols they respectively appertain. The usage is admittedly of foreign origin and is traced to intercourse with Tartar nations. Mayer's Chinese Readers' Manual, Pt. 2, pp. 296, 302.

¹Cat. No. 15415, Mus. Arch., Univ. Penn.

When a free-born Korean boy reaches the age of 15, he has a small wooden label cut, which he carries with him. This label is made of pear wood or mahogany, and is about 2 inches in length by $\frac{1}{2}$ inch broad. It is inscribed in Chinese characters. Across the top is the name of the *Pou* (Chinese *pù*) or ward to which the boy belongs. Then in a line below the designation *han-ryang*, "leisure fellow," that is, not in government service, and the boy's name with the date of his birth. The date on which the label is made is cut on the reverse. This label must be sealed by an official of the treasury, who brands it with a hot iron and registers the boy's name and other particulars. When a boy enters the *Tjin-sǎ* (Chinese, *tsun sz'*), he has another tablet cut, this time of boxwood, with his proper title instead of *han-ryang*. Upon passing the military or civil examinations, the label is cut from black horn, and upon obtaining the first grade an ivory label is permitted. Since writing the above account, which was dictated by Mr. Pak Young Kiu, Korean Charge d'Affaires at Washington, I have received from Dr. E. B. Landis, at Chemulpo, two specimens of *ho-hpai*.

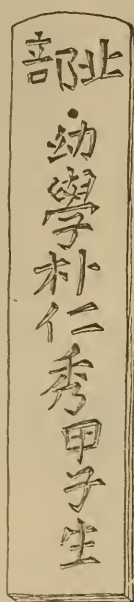


Fig. 192.

NAME TABLET (*Ho-hpai*).Length, $3\frac{5}{8}$ inches.

Korea.

Cat. No. 19845, Museum of Archaeology, University of Pennsylvania.



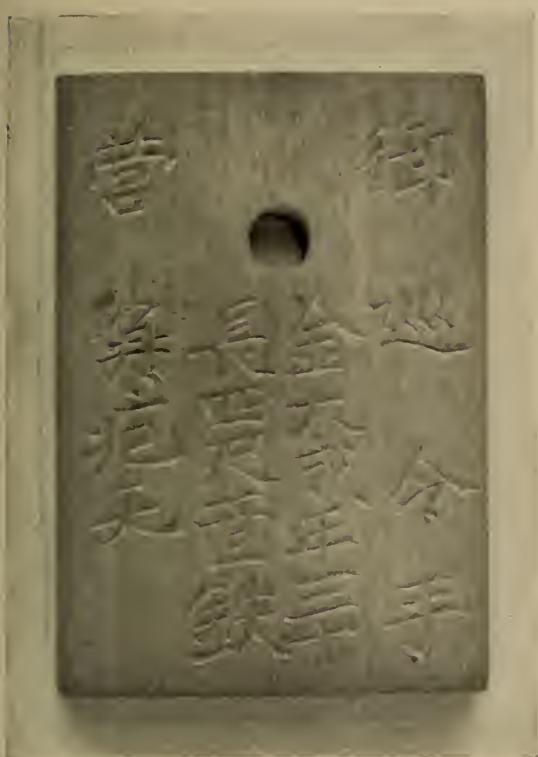
Fig. 193.

NAME TABLET (*Ho-hpai*).Length, $3\frac{5}{8}$ inches.

Korea.

Cat. No. 19846, Museum of Archaeology, University of Pennsylvania.

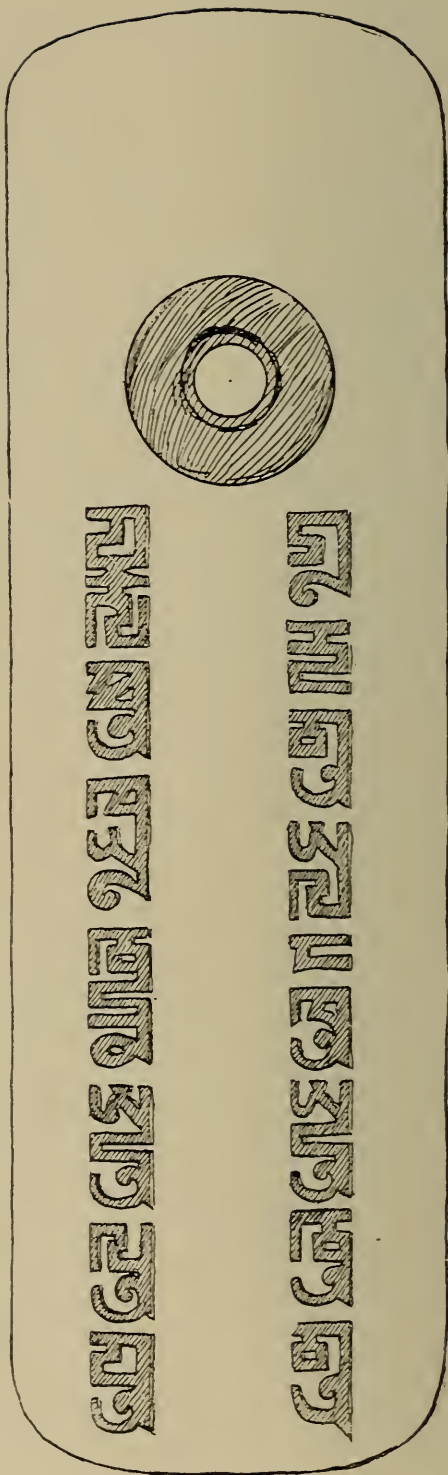
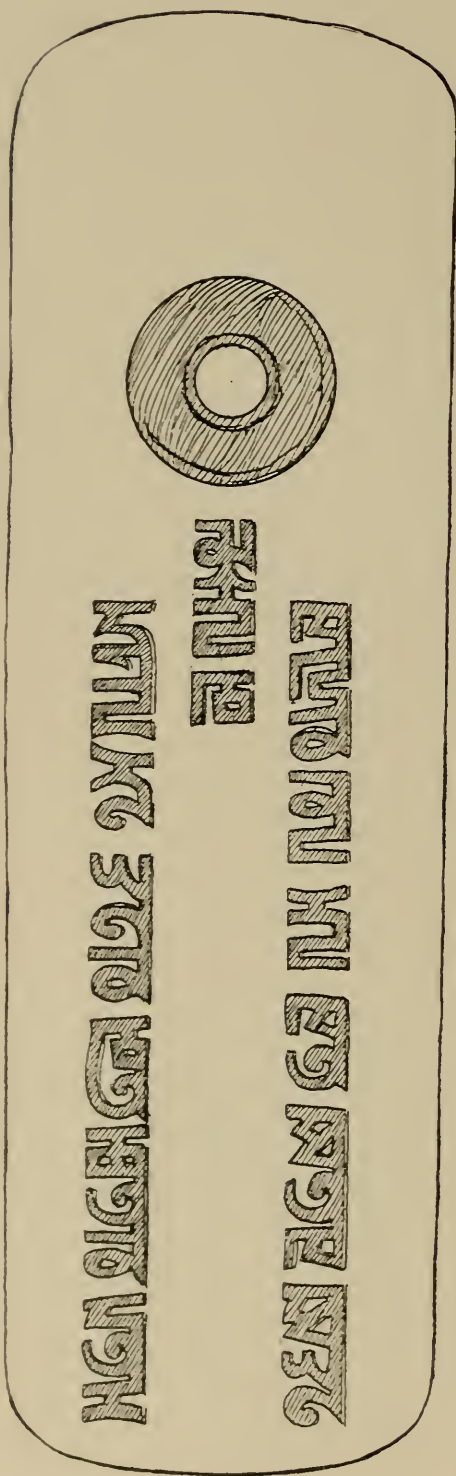
(figs. 192, 193), concerning which he gave the following particulars: "I have simply had reproductions made, as they are not in use since the war. They are, however, exact reproductions, with the exception of the magistrate's seal, which was always burnt on the back. At the top, reading from right to left, are the words *Yon Hak* and *Han Ryang*. These refer to the class of society to which he belongs. The first is "Patrician" and the second "Plebeian." After this follows the name and surname and in the lower corner the year of birth. On the back is the year when the *ho-hpai* expires. It is renewed every three years. There is another kind called *yo-hpai* (Plate 33), which was used by the servants of the various officials as proof of identity when drawing their monthly wages, which was always paid in kind." *Yo-hpai* (Chinese, *yü p'ü*) is defined in the *Dictionnaire Coréen Français* as "plaque des soldats sur laquelle leur nom est écrit." The secret agents of the king in Korea, called *E-sa* (Chinese, *ü sz'*), used a plate of silver engraved with a horse as an emblem of their royal authority.



IDENTIFICATION TABLETS (Yo-hpai).

Korea.

Cat. Nos. 20099, 20098, Museum of Archaeology, University of Pennsylvania.



PÁIZAH OF THE MONGOLS.

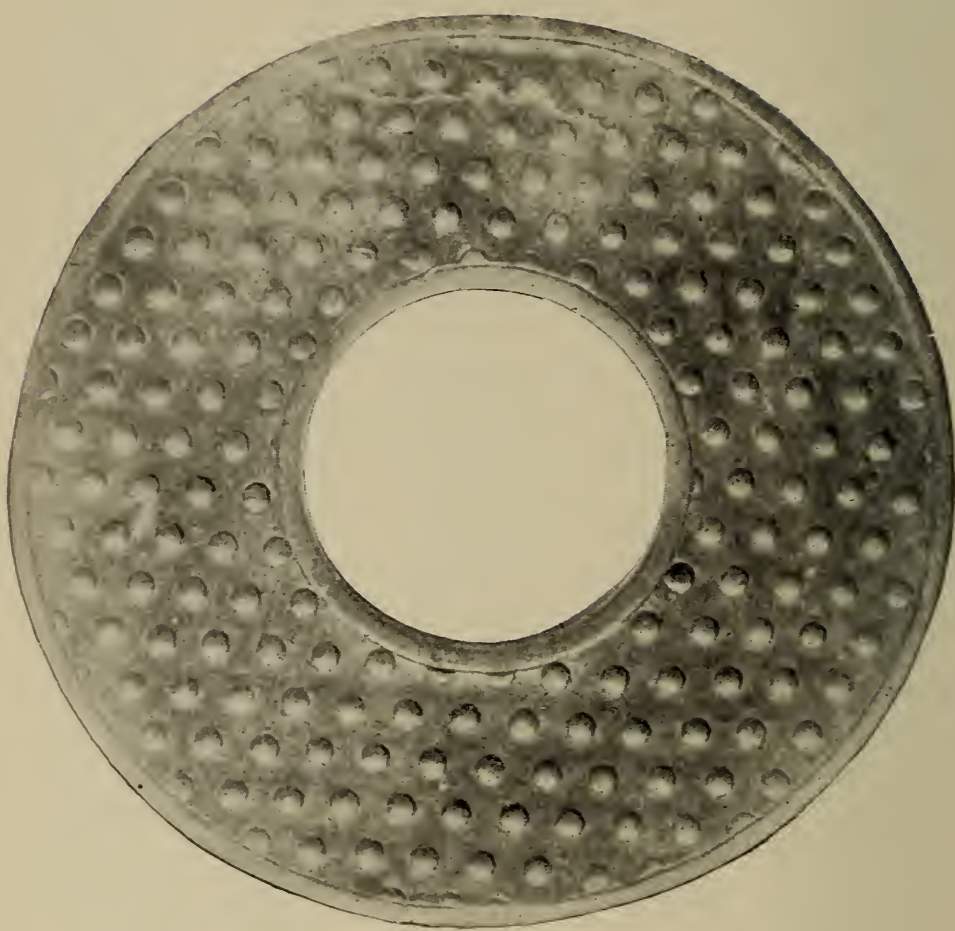
Length, 6 inches.

From a specimen found in East Siberia.

From the Book of Ser Marco Polo, by Col. Henry Yule, C. B.



BAMBOO MONEY.
U. S. National Museum. Glover collection.



OBVERSE OF JADE AUDIENCE RING.

Diameter, $4\frac{1}{4}$ inches.

Ancient China.

Cat. No. 130662, U.S.N.M.

Analogous to these Korean objects are the tablets of authority carried by the Mongol princes, which are described by Marco Polo (Plate 31). These were of silver, silver gilt, and of gold, and were inscribed with a legend commanding respect in the name of the Kaan. To this was added the figure of a lion, and below the sun and moon, while the highest lords received a tablet with gerfalcons. I have been led to refer to these *Pāizah*, which are so fully described and illustrated by Colonel Yule (Marco Polo, Book II, C. VII, Note 2), through their suggesting in connection with other objects a theory of the origin of the so-called "cash" or current money of China (fig. 194). These coins, which uniformly bear the name of the regnal period, by which the sovereign is known to the world, may be regarded as having been, like the *Pāizah*, emblems of authority emanating from the sovereign. Specimens of Chinese bamboo money (Plate 35), similar in appearance to the Korean *ho-hpai*, occur in the Glover collection in the United States National Museum.

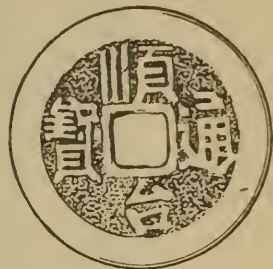


Fig. 194.

OBVERSE OF CHINESE COIN
(*Ts'in*).

China.

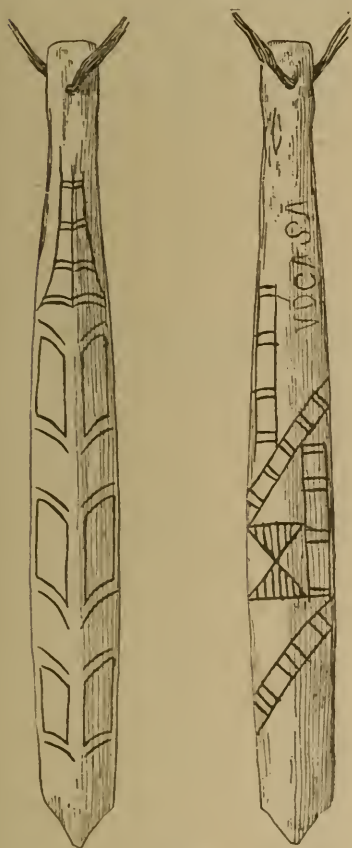


Fig. 195.

TLINGIT TABLET.

Length, 6½ inches.

Alaska.

Cat. No. 168372a, U.S.N.M.

In ancient China, according to the Book of History (Shu King, Sec. II), the nobles are described as having five kinds of scepters

made of precious stones. Of these, the two lowest classes were round with a hole in the center and about 5 inches in diameter. A specimen in the United States National Museum (Cat. No. 130662, gift of Chang Yen Hoon, His Imperial Chinese Majesty's envoy extraordinary and minister plenipotentiary) (Plate 36) is made of jade, and is of the kind designated as *kuk pik*, or "grain-besprinkled slab."

We have in these scepters an ancient emblem of authority corresponding in form to the coin. When we examine the name of the latter, we find it to be *ts'in*, a word differing but slightly from *tsin*, "arrow," from which I regard both the coin and tablet as having in all probability been derived. The character for *ts'in* is written with the radical for "spear" doubled, with the radical for "metal" on the left. It differs in the substitution of metal for *p' in*, a "leaf" or "slip," from the character *tsin* used in writing the name of the Korean playing cards, *htou-tjyen* (Chinese, *tau tsin*) (No. 77).

Analogous to the Korean *ho-hpai* are the amulet bags (*mamori bukuro*, protection bag), which Japanese children used to wear outside their dresses with a ticket containing their names and residences attached. "At a later period they are concealed; but all classes wear them during their natural lifetime. Some of them contain Sanskrit characters, others pictures or

names of Shinto divinities or Buddhist saints, while all contain the navel cord of the wearer with the date of his birth inscribed."¹

The Tlingit make and carry small flat bone and ivory tablets. A number collected by Lieut. George T. Emmons, U. S. N., in the United States National Museum (Cat. No. 168372) are represented in figs. 195-200.

¹Glimpses of Dreamland, translated by Ludovic Mordwin; The Chrysanthemum, II, No. 2, Note, p. 50.

The designs are incised and filled in with red paint. These the writer is disposed to class with the Korean *ho-hpai* as personal emblems. One of them (fig. 195) is in the



Fig. 196.

TLINGIT TABLETS.

Length, $4\frac{1}{2}$ to $4\frac{3}{8}$ inches.

Alaska.

Cat. No. 168372b, c, d, U.S.N.M.

form and is marked like the feathered shaftment of an arrow. It bears at the upper end on one side the word *VOCASA* inscribed in Roman letters. Another somewhat

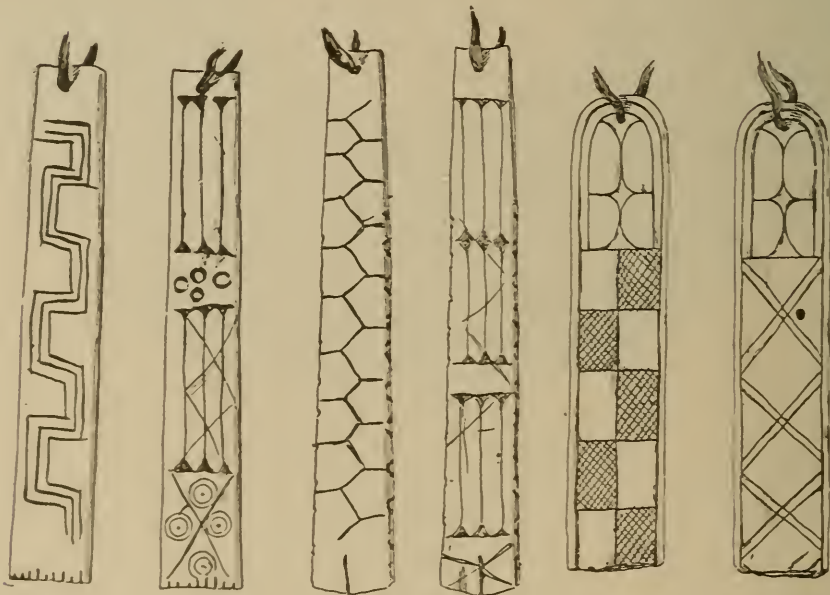


Fig. 197.

TLINGIT TABLETS.

Length, 4 to $4\frac{3}{8}$ inches.

Alaska.

Cat. No. 168372e, f, g, U.S.N.M.

similar tablet in the University Museum (Cat. No. 15319) is represented in fig. 201. It is not impossible that this string of bones collected by Lieutenant Emmons and

stated by him to be part of the paraphernalia of a Shaman are analogous to string of leg bones of the Arctic fox, which Mr. Bryant found in use among the Arctic Highlanders. (See p. 719.)

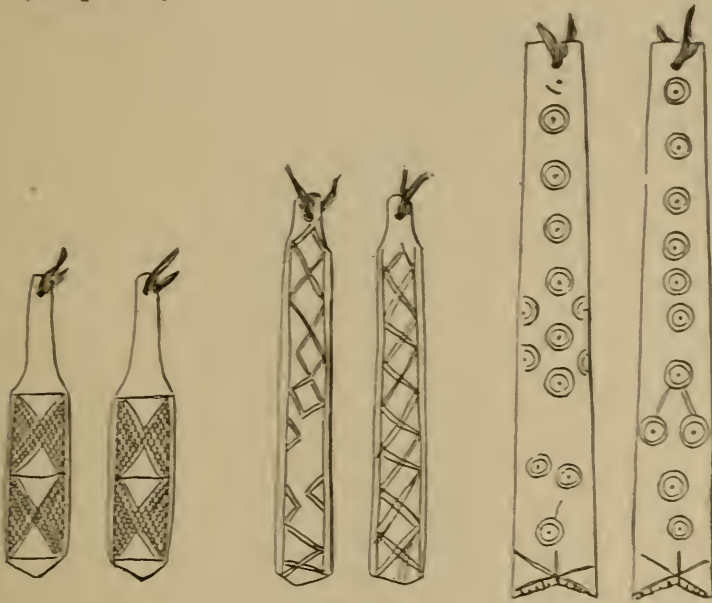


Fig. 198.

TLINGIT TABLETS.

Lengths, $2\frac{1}{2}$, $3\frac{1}{2}$, and $4\frac{3}{4}$ inches.

Cat. No. 1683724, i, k, U.S.N.M.

64. TANZAKU. A narrow strip of thick cardboard, $2\frac{3}{8}$ by $14\frac{1}{2}$ inches, used for writing verses on. Japan.

The usual size of the *tanzaku* is about $2\frac{1}{2}$ by $14\frac{1}{4}$ inches. They are frequently made of a thin strip of wood. The name is a Japanese transcription of the Chinese *tün ch'ak* "a short list or memoranda,"¹ and the object itself may be regarded as a survival from the time when books were engraved on similar strips of bamboo, like existing Buddhist scriptures in Siam. The temple lots, *mikuji* (No. 68), and the Korean cards (No. 77) correspond with a bundle of *tanzaku*, which are still represented on and give name to certain card-pieces in the Japanese pack (No. 81).

The ancestry of the book in Eastern Asia may be traced, not only to the engraved strips of bamboo (Chinese *ch'ak*), but,

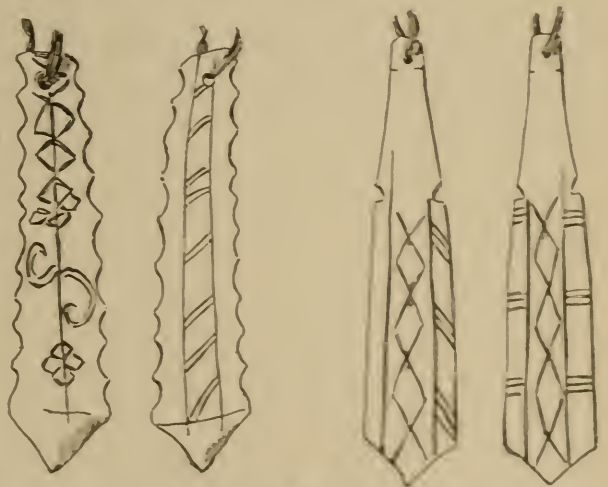


Fig. 199.

TLINGIT TABLETS.

Length, $3\frac{1}{2}$ to $3\frac{3}{4}$ inches.

Cat. No. 1683724, m, U.S.N.M.

¹ Hepburn. A more obvious explanation would be found in *tün ch'ak*, a single slip of bamboo.

in the opinion of the writer, to the bundle of engraved or painted arrow-derived slips used in divination. Indeed the Korean name for the pack of cards, *tjil*, is defined by the Chinese *tít*, applied in Korea to a complete set of volumes of the same work.

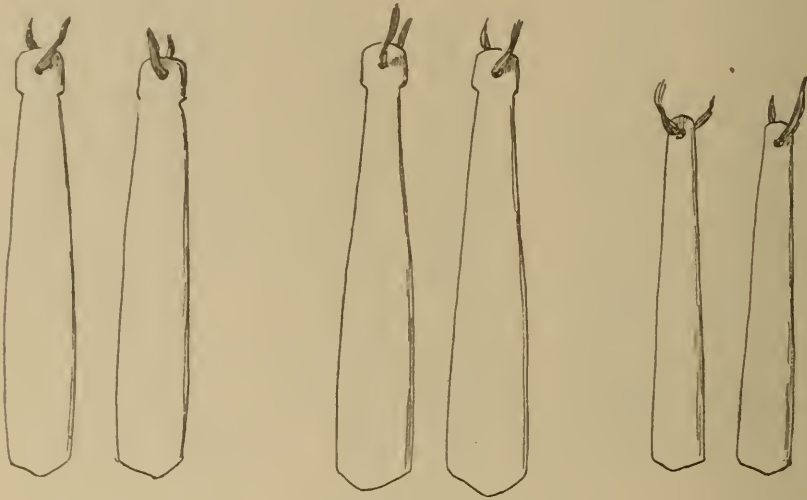


Fig. 200.

TLINGIT TABLETS.

Lengths, $3\frac{3}{8}$, $3\frac{1}{6}$, and $2\frac{7}{8}$ inches.

Cat. No. 168372n, o, p, U.S.N.M.

The folding fan of China and Japan is not unlikely to have originated from these *tanzaku* or writing slips, which the nobles carried in order to make memoranda when in the presence of the sovereign. The

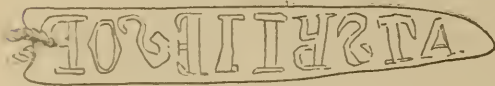
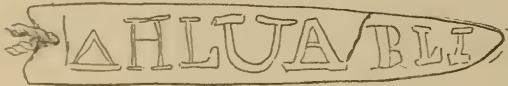


Fig. 201.

ALASKA INDIAN TABLET.

Length, 4 inches.

Alaska.

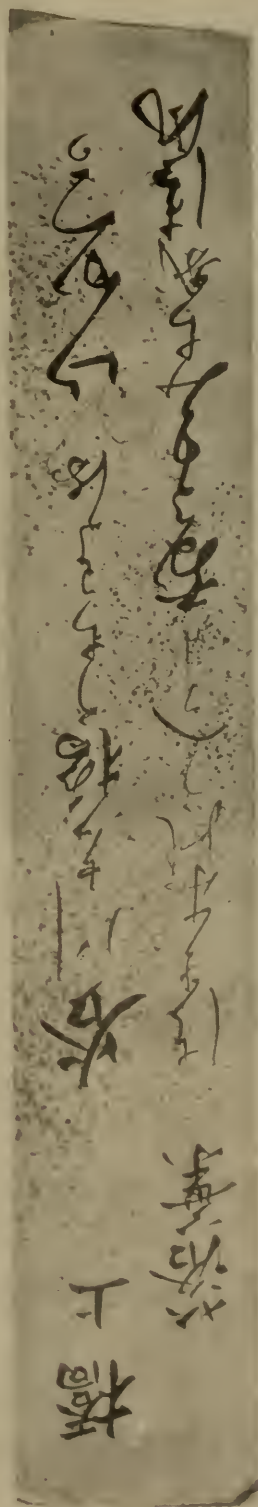
Cat. No. 15319, Museum of Archaeology, University of Pennsylvania.

fan is constantly used for writing upon, one side originally being left blank for the purpose. In Japan a folding fan, *ogi* (fig. 202), formed an essential part of the ceremonial costume of a gentleman, and was carried in front in the belt. Referring to the folding fan, Mr. Giles says:

The number of its bones or ribs is a matter which is by no means left to chance. Sixteen, including the two outer pieces, may be quoted as the

standard; but fans made in certain localities have more, as many as thirty-two, and sometimes even thirty-six. The reason why the number sixteen is preferred is that such a fan opens into a convenient number of spaces to receive the poetical inscription, which custom has almost, but not altogether, tied down to a given number of lines.¹

¹ Herbert A. Giles, *On Chinese Fans*, Historic China and other Sketches, London, 1882, p. 299.



TANZAKU.

Length, 14½ inches.

Japan.

In the author's collection.

65. YEKI. Divination. Japan.

Fifty splints of bamboo, *zeichaku*, and six wooden prisms, *sangi*.¹

The sticks may vary in length from 2 to 14 inches, the set exhibited being 14 inches in length. The wooden prisms, which are usually made of *shitan*, or red sandalwood, have two contiguous sides plain and two marked with a transverse cut about 1 inch wide, which is painted red (fig. 203). These blocks, called *sangi*, or "calculating sticks," are placed before the fortune-teller, parallel to each other and with their plain faces uppermost. The fortune teller takes the bundle of splints in his right hand and raises them reverentially to his forehead. He then places the ends in the palm of his left hand and shuffles them with a rotary motion (fig. 204). Taking the bundle in his right hand, he places one so that it projects between his little finger and his third finger (fig. 205). Dividing the remainder in two parts, he places one of the bundles between his middle finger and forefinger and the other between his forefinger and thumb. The latter bundle is then counted, taking four splints at a time around the *Pát kwá* or "Eight Diagrams" (fig. 206), beginning at the one consisting of unbroken lines designated by the Chinese character *k'in*, and corresponding with the Northwest. When the count has been made around the diagrams as many

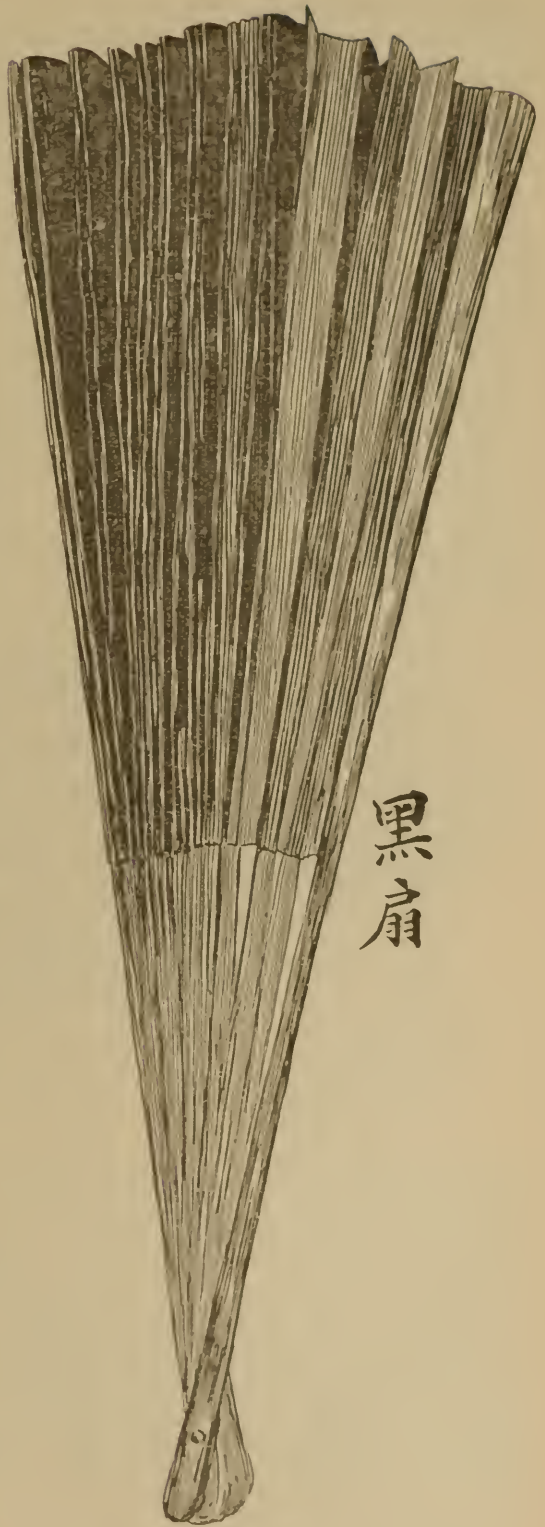


Fig. 202.

FOLDING FAN (*hak shin*, "black fan").

Length, 11½ inches.

Canton, China.

Cat. No. 19461, Museum of Archaeology, University of Pennsylvania.

¹ Cat. No. 175655, U.S.N.M. Gift of Stewart Culin.

times as possible there will remain less than eight sticks. This remainder indicates the complement of the destined diagram according to the arrangement shown in fig. 206.

The trigram indicated is then recorded by means of the *sangi*, the faces of the three nearest the fortune-teller being turned to correspond with the broken or unbroken lines of the trigram. The *zeichaku* are then again manipulated and the three remaining *sangi* turned in the same manner to agree with the trigram designated by the count. The indication obtained from these two operations is then referred to the corresponding diagram in the *Yik King* or "Divination Classic," and the fortune teller draws his conclusions from the text which explains it, aided by traditional interpretations.

In this system of divination we have an illustration of the use of arrow-derived splints divided at random to determine the number, place being ascertained by counting around a diagram, the *Pát kwá*, symbolic of the World Quarters. It is also practised at the present

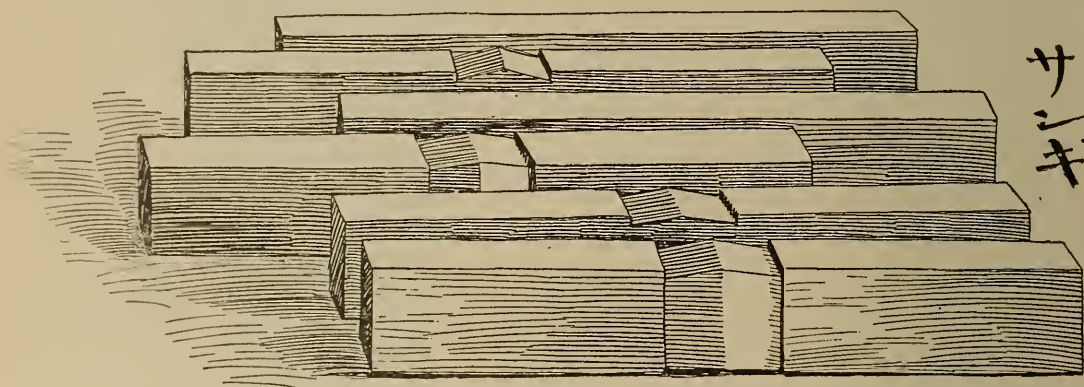


Fig. 203.
CALCULATING BLOCKS (*sangi*) FOR YEKI.
Length, $4\frac{1}{2}$ inches.
Japan.
Cat. No. 175655, U.S.N.M.

day in Korea and in China, having doubtless been derived both in Japan and Korea from China. It is described minutely in one of the appendices to the "Divination Classic."¹ According to the Chinese record, the stalks of a plant, the *Ptarmica Siberica* were used, those which grew on the grave of Confucius being most highly esteemed.

The assumption that the *zeichaku* (Chinese, *shai chuk*)² were originally arrows is based upon analogy, the arrow derivation of many similar objects employed in divination being clearly apparent. The *sangi* (Chinese, *sün muk*), or "calculating sticks" may be regarded as sur-

¹ Appendix III, Chap. 9, p. 51.

M. C. de Harlez (Les Figures Symboliques du Yi-King, Journal Asiatique, New Ser. IX, p. 280) has given a translation of an explanation of the method of divination by means of the splints affixed to the Manchu-Chinese edition of the *Yik King* of the Emperor Kien Lung. A translation of the rules for divination with the sticks is given in Takashima Ekidan, Tokio, 1893.

² *Shai*, "to divine with slips of Milfoil; the most efficacious is from the grave of Confucius;" *Chuk*, "bamboo." Williams' Tonic Dictionary.

viving from or suggested by the two-faced staves, from which the diagrams originated.

The above-described method of divination has a counterpart in the Chinese game of *Fán t'án*, or "repeatedly spreading out," which is played in the gambling houses established by the immigrants from China in many American cities. *Fán t'án* is played with a quantity of Chinese brass "cash," for which buttons and other small objects are sometimes substituted. These take the place of the splints or *zeichaku*. The dealer covers a handful of these cash, taken at random from the pile, with a brass cup.¹ The players lay their wagers on the four sides of a square, numbered "one," "two," "three," and "four." The dealer then divides off the "cash" under the cup by fours, using for the purpose a tapering rod² of teak wood, about 18 inches in length. When all the fours are counted off, the winner is determined by the number remaining.³ In these operations we have the random partition of "cash" substituted for that of splints, and the square with its four numbered sides (corresponding with the Four Quarters) for the *Pát kwá* or "Eight Trigrams" around which the splints are counted.

Analogous also to the Chinese and Japanese method of divination with splints is the Malagassy *Sikidy*, a system of fortune-telling in common use in Madagascar, in which beans, rice, or other small objects that can be easily counted or divided, are employed. A quantity of beans are placed in a heap, and from these a handful is taken at random. From this handful the diviner withdraws first two, then two more, and so on successively until two only are left, or, it may be, the odd number, one. The process is repeated and the remainders, one or two, are marked in tables of squares, from which the determinations are afterwards made.

The method of marking down, by means of one or two dots, is identical with that frequently employed in divining with the splints. The process is repeated four times, one of sixteen combinations being

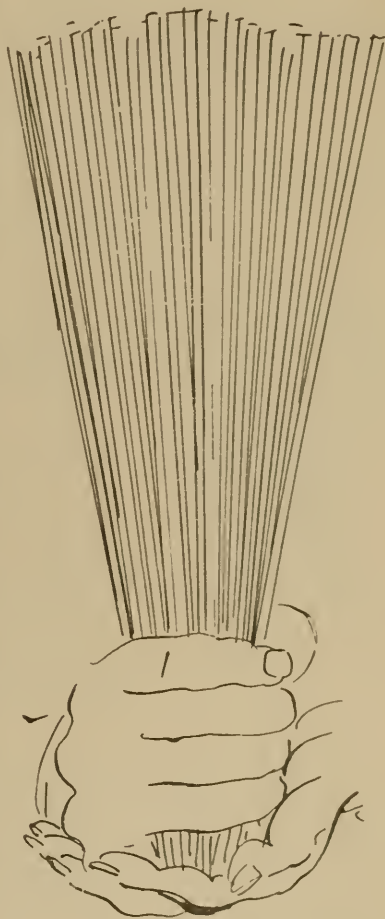


Fig. 204.

METHOD OF SHUFFLING ZEICHAKU.

Japan.

From Korean Games.

¹ *T'án k'oi* or "spreading out cover."

² *T'án pong*, "spreading-out rod."

³ Stewart Culin, *The Gambling Games of the Chinese in America*, Philadelphia, 1891; also, *The Origin of Fán t'án*, *Overland Monthly*, August, 1896.

formed, which are given, with their Malagassy names, in the following table:

1	• • • • • • • •	<i>Jama.</i>	9	• • • • • • • •	<i>Adikizy.</i>
2	• • • • • • • •	<i>Taraika.</i>	10	• • • • • • • •	<i>Alezany.</i>
3	• • • • • • • •	<i>Aditsimay.</i>	11	• • • • • • • •	<i>Alemora.</i>
4	• • • • • • • •	<i>Alokola.</i>	12	• • • • • • • •	<i>Adibidjady.</i>
5	• • • • • • • •	<i>Asoravary.</i>	13	• • • • • • • •	<i>Kizo.</i>
6	• • • • • • • •	<i>Asoralahy.</i>	14	• • • • • • • •	<i>Adikiasajy.</i>
7	• • • • • • • •	<i>Molahidy.</i>	15	• • • • • • • •	<i>Saka.</i>
8	• • • • • • • •	<i>Mikiarija.</i>	16	• • • • • • • •	<i>Vontsira.</i>

In order to explain the Malagassy names, which in part at least are Arabic, M. Steinschneider¹ gives a table, compiled from a Hebrew lot book in Munich, with the Arabic, Hebrew, Latin, and Berber designations of these combinations of dots. The figures, he states, are supposed to represent the astrological "houses" connected with the planets. They are distinguished as male and female—a distinction which we may assume exists in the single and double dots, as in the unbroken and broken lines. Steinschneider assumes that this supposed Arabic science was transplanted by scholars like Abraham ibn Essa and Jehuda al-Charisi, who traveled from Spain in Europe and the Orient in the twelfth and thirteenth centuries, through so-called lot books into Hebrew.

Sibree relates that in a simple form of *Sikidy* an indefinite number of grass stalks are counted off in twos until only one or two are left.²

¹ Zeitschrift d. deutschen morgenländischen Gesellschaft, XXXI, p. 762.

² For further references to *Sikidy* see:

Zeitschrift d. deutschen morgenländischen Gesellschaft, XXXI, p. 543.

William Ellis, History of Madagascar, London, 1838, p. 431.

James Sibree, jr., Madagascar and Its People, London, 1870, p. 392.

James Sibree, jr., The Great African Island, London, 1880, p. 308.

James Sibree, jr., Madagascar before the Conquest, London, 1896, pp. 162, 285.

L. Dahle, Antananarivo Annual, II, p. 80.

A method of fortune telling, based upon the sixteen combinations of single and double dots, taken four at a time, worked by means of a table not unlike that employed in *sikidy*, is to be found in a popular handbook entitled, "The Gypsy Dream Book and Fortune Teller," M. J. Ivers & Co., New York, under the title of "The Oraculum; or, Napoleon Buonaparte's Book of Fate."

The diagrams or dot combinations: . . . etc., are discovered by making four rows of dots at random : : and afterwards counting them, even yielding . . and odd . .

Reviewing the references in the Greek and Roman classics to divinatory practices with rods resembling those above described, there is to be found in Ammianus Marcellinus¹ the following account of the custom of the Alani:

They predict the future in a marvelous way. They take straight rods of osier, and, separating them with certain secret charms at a fixed time, they know clearly what is meant.²

Herodotus relates:

Scythia has an abundance of soothsayers, who foretell the future by means of a number of willow wands. A large bundle of these wands is brought and laid on the ground. The soothsayer unties the bundle and places each wand by itself,³ at the same time uttering his prophecy. Then, while he is still speaking, he gathers the rods together again, and makes them up once more into a bundle. This mode of divination is of home growth in Scythia.⁴

The latter account does not agree except so far as concerns the bundle of rods, but almost exact parallels to the *zeichaku*, both in number and method of manipulation, are to be found among many aboriginal tribes in America. A résumé of the descriptions given by the early writers is furnished in that admirable paper on "Indian Games" by Mr. Andrew McFarland Davis, published in the Bulletin of the Essex Institute,⁵

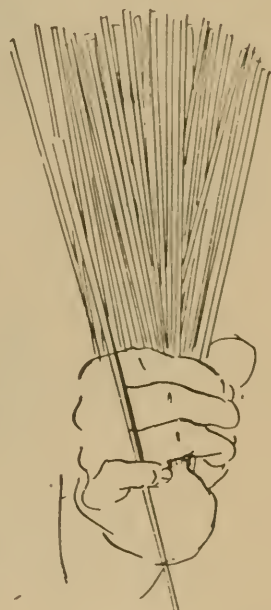


Fig. 205.

ONE STICK PLACED BETWEEN LITTLE FINGER AND THIRD FINGER.

From Korean Games.

¹ Volume XXXI, p. 2.

² Somewhat comparable is the custom of the Guinea negroes described by Bosman (William Bosman, *A New and Accurate Description of the Coast of Guinea*; translated in Pinkerton's *Voyages*, London, 1814, XVI, p. 399): "If the priest is inclined to oblige the querent the questions are put to the idol in his presence, and generally in one of the two following methods: The first way is by a bundle of about twenty small bits of leather, in the middle of which they bind some trash of the same nature with that they fill the mentioned pipe; some of these ingredients promise good success and others threaten the contrary. This bundle the priest shuffles together several times, and if those which presage a good issue happen to come frequently together he answers the querent that his undertaking shall end well."

³ O. Schrader, "One behind another," *Prehistoric Antiquities*, translated by Frank Byron Jevons, London, 1890, p. 279.

⁴ Book IV, 67, Rawlinson, New York, 1893, III, p. 46.

⁵ Volumes XVII, Nos. 7-9, 1885; XVIII, Nos. 10-12, 1886.

under the caption of "Straw or Indian Cards," from which I have extracted the following:

To play the game a number of straws or reeds uniform in size and of equal length were required. They were generally from 6 to 10 inches long. The number used in the game was arbitrary. Lawson puts it at fifty-one, Charlevoix at two hundred and one. The only essential points were that the numbers should be odd and that there should be enough of them so that when the pile was divided into two parts, a glance would not reveal which of the two divisions contained the odd number of straws. In its simplest form the game consisted in separating the heap of straws into two parts, one of which each player took, and he whose pile contained the odd number of straws was the winner. Before the division was made the straws were subjected

to a manipulation, somewhat after the manner of shuffling cards. They were then placed upon the deerskin or upon whatever other article was selected as a surface on which to play. The player who was to make the division into two heaps, with many contortions of the body and throwing about of the arms, and with constant utterances to propitiate his good luck, would make a division of the straws with a pointed bone or some similar instrument,¹ himself taking one of the divisions while his adversary took the other. They would then rapidly separate the straws into parcels numbering ten each, and determine from the fractional remainders who had the odd number. The speed with which the process of counting was carried on was always a source of wonder to the lookerson, and the fact that the

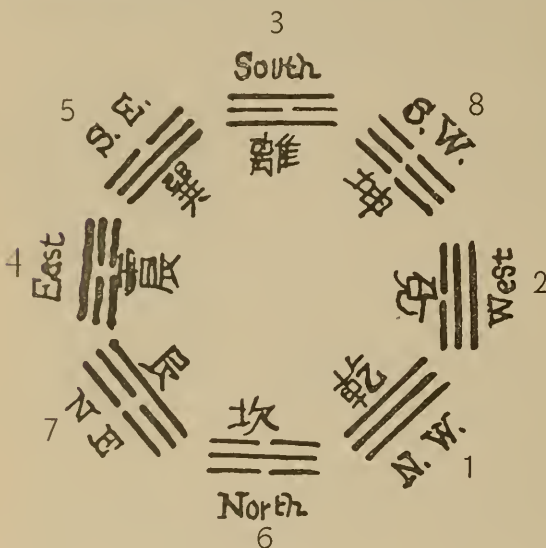


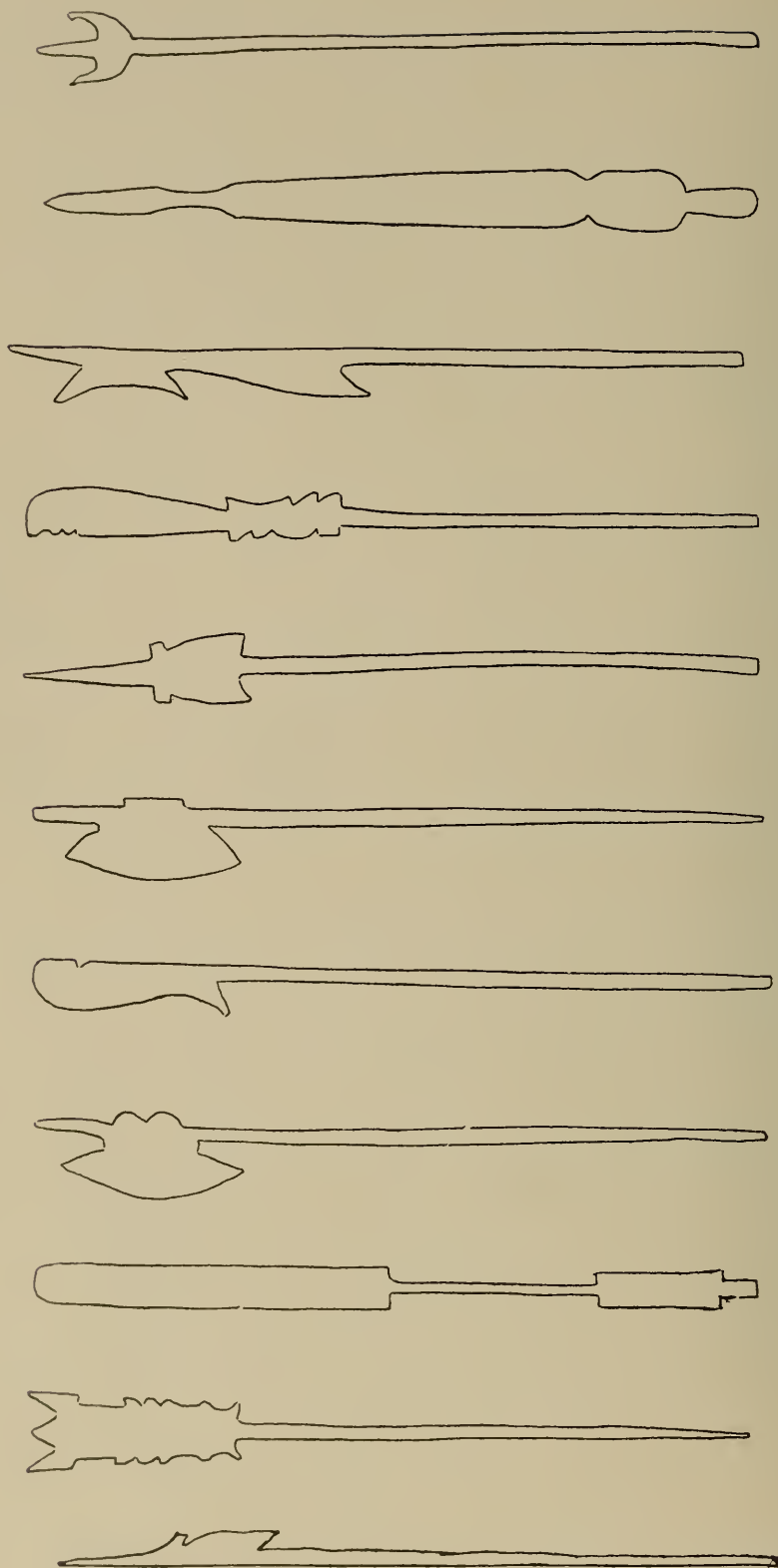
Fig. 206.

EIGHT DIAGRAMS (*Pát kwá*).

Numerical compliments indicated by numerals.

counting was done by tens is almost invariably mentioned. Between two people betting simply on the odd number no further rules were necessary. To determine which had the heap containing the odd number, there was no need to foot up the total number of tens. It was to be settled by what was left over after the last pile of complete tens was set aside. The number itself might be either one, three, five, seven, or nine. In the more complicated forms of the games this led to giving different values to these numbers, the nine being always supreme and the one on which the highest bets were wagered. It was generally understood that the holder of this number swept the board, taking all bets on other numbers as well as those on nine. It was easy to bet heads against heads and skins against skins in a simple game of odd or even, but when the element of different values for different combinations was introduced some medium of exchange was needed to relieve the complications.

¹An explanation is here suggested for the origin of the familiar game of jackstraws, in which a bundle of splints allowed to fall at random in a pile are separated one by one without disturbing the others. Mr. E. W. Nelson informs me that a game identical with jackstraws is played by the Eskimo of Norton Sound on the Yukon River, Alaska. The sticks, which are made of spruce or cottonwood, or any ordinary driftwood, are about the size of a match, squared, and about four inches in length. Those he collected for the U. S. National Museum were tied with a cord in a bundle of about one hundred. The sticks each have the same value. They are separated by means of a slender stick a little longer than the others. Another method of using these sticks is to lay the bundle on the back of the hand, toss them

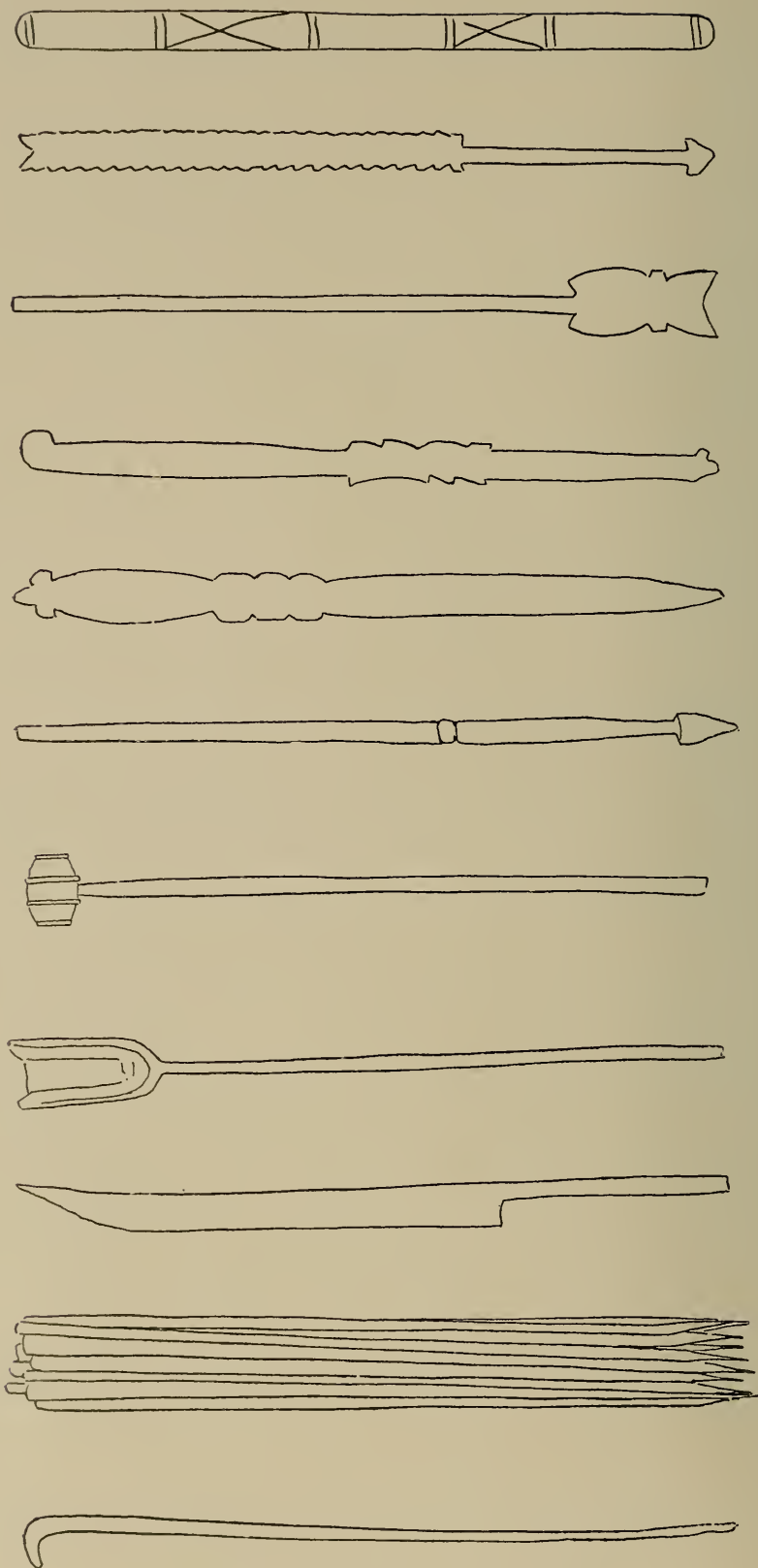


CARVED SANDALWOOD JACKSTRAWS (*Héung t'o pát pò*).

Length, $3\frac{1}{2}$ inches.

Canton, China.

Cat. No. 16221, Museum of Archaeology, University of Pennsylvania.



CARVED SANDALWOOD JACKSTRAWS.

Length, $3\frac{1}{2}$ inches.

Canton, China.

Cat. No. 16221, Museum of Archæology, University of Pennsylvania.

Stones of fruit were employed, just as chips or counters are used in modern gambling games, and a regular bank was practically instituted. Each player took a certain number of these counters as the equivalent of the value of the merchandise which he proposed to hazard on the game, whether it was a gun, a blanket, or some other article. Here we have all the machinery of a regular gambling game at cards, but the resemblance does not stop here. The players put up their bets precisely as they now do in a game of faro, selecting their favorite number and fixing the amount, measured in the standard of the game, which they wish to hazard. "By the side of the straws, which are on the ground, are found the (*grains*) counters," says Perrot, "which the players have bet on the game." In another place the method of indicating the bets is stated as follows: "He (meaning the one who has bet) is also obliged to make two other heaps. In one he will place five, in the other seven straws, with as many (*grains*) counters as he pleases. * * * Complicated rules determined when the players won or lost, when the bets were to be doubled, and when they were to abide the chance of another count. The loser at the game, even after all he had with him was gone, was sometimes permitted to continue the game on his promise to pay. If ill luck still pursued him the winner could refuse him credit and decline to play for stakes that he could not see. The game often lasted several days, one after another relieving his comrades at the play until one of the

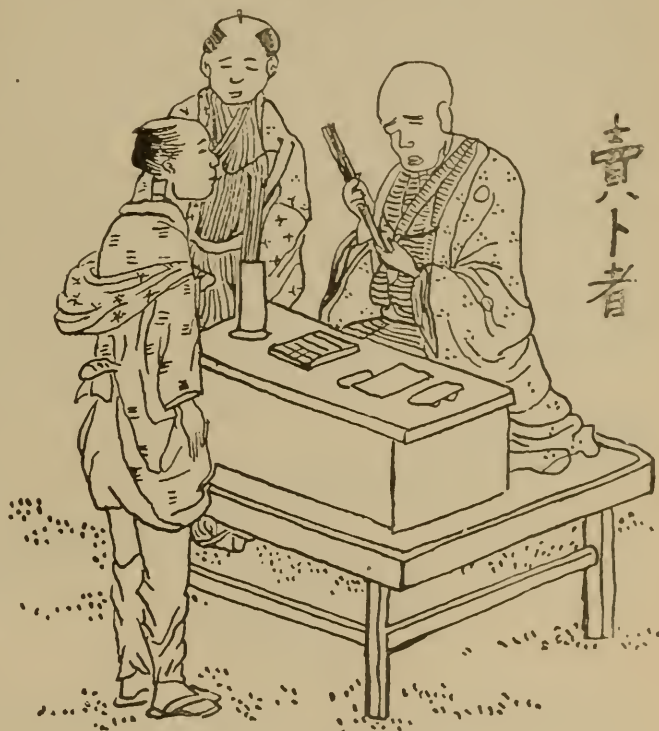


Fig. 207.

JAPANESE FORTUNE-TELLER WITH ZEICHAKU.

After native drawing in *Our Neighborhood*, by T. A. Purcell, reproduced in Korean Games.

into the air, and catch them on the palm. If the player succeeds in grasping them all he lays one splint aside and tries again.

The antiquity of the game of jackstraws in India appears to be illustrated by a passage in the *Tevigga Sutta* (*The Magghima Silam*. 4; *The Sacred Books of the East*, XI, Oxford, 1881, p. 193) in a list of games detrimental to the progress of virtue. "That is to say, with a board of sixty-four squares, or one hundred squares; tossing up; removing substances from a heap without shaking the remainder."

In Canton, China, children use splints from burnt punk sticks (*héung k'euk*, literally, "incense feet"), one hundred being held in a bunch and allowed to fall, the players endeavoring to remove them one at a time from the pile without disturbing the others, using another stick bent over at the end for the purpose. They call the game *tiú héung k'euk*. The Chinese at Canton make carved jackstraws, but I am informed by Chinese merchants that they are sold only for export. A set in the University Museum (Cat. No. 16221) (Plates 38, 39) consists of forty-two pieces, twenty small pointed sticks, twenty miniature weapons and implements, and two hooks for removing the splints. They are made of sandal wood, $4\frac{1}{2}$ inches in length, and their name is given by the venders as *héung t'o pát pò*.

two sides had lost everything. * * * The game of straw," says Perrot,¹ from whose account we have made the foregoing digest, "is ordinarily held in the cabins of the chiefs, which are large, and are, so to speak, the Academy of the Savages."

Lawson² describes it, but in slightly modified form, as follows:

"Indian Cards.—Their chiefest game is a sort of Arithmetick, which is managed by a parcel of small split reeds, the thickness of a small Bent. These are made very nicely, so that they part, and are tractable in their hands. They are fifty-one in number, their length about 7 inches. When they play, they throw part of them to their antagonist. The art is to discover, upon sight, how many you have, and what you throw to him that plays with you. Some are so expert at their numbers that they will tell ten times together what they throw out of their hands. Although the whole play is carried on with the quickest motion it is possible to use, yet some are so expert at this game as to win great Indian Estates by this Play. A good set of these reeds fit to play withal are valued and sold for a dressed doe-skin."

The first game described by Roger Williams³ in his Chapter on Gaming is "a game like unto the English Cards, yet instead of Cards they play with strong Rushes." In his vocabulary he gives "*Akésuog*: they are at cards, or telling Rushes; *Pissinné*—

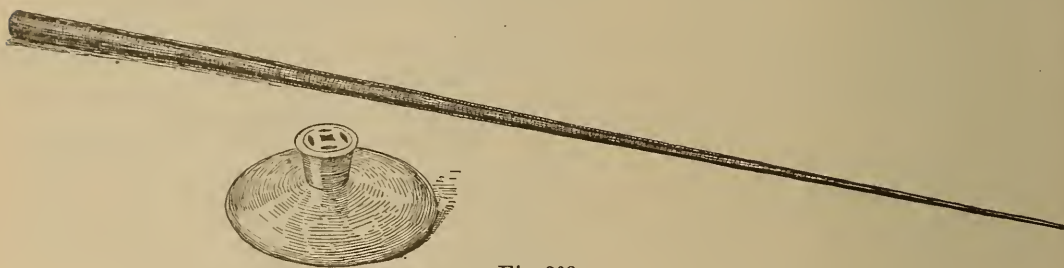


Fig. 208.

ROD AND COVER USED IN FÁN T'ÁN.

Length of rod, $17\frac{1}{2}$ inches; diameter of cup, $3\frac{1}{2}$ inches.

Canton, China.

Cat. Nos. 7159, 7160, Museum of Archaeology, University of Pennsylvania.

ganash: their playing Rushes; *Ntakèsemin*: I am a telling or counting; for their play is a kind of Arithmetick." Strachey found this game among the Indians in Virginia. He describes it as follows: "Dice play, or cardes, or lotts, they know not, how be it they use a game upon rushes much like primero, wherein they card and discard and lay a stake or two, and so win or lose."

Mr. Davis cites other references to the game by Fathers Brebeuf,⁴ Boucher,⁵ Lafitan,⁶ Charlevoix,⁷ and Beverly,⁸ none of which throw any additional light upon it.

¹Nicholas Perrot, *Mémoire sur les Mœurs, Coustumes et Relligion des Sauvages de l'Amérique Septentrionale*, Leipzig and Paris, 1867.

²John Lawson, *History of North Carolina*, London, 1718, p. 176. The tribes whose customs are described by him are Catawba, Tuskeruro (Tuscarora), Pampticough, and Woccon. He does not specify that the game was played by any one of these tribes in particular.

³Roger Williams, *A Key to Language of America, etc.*, together with brief observations of the Customes, Manners, etc., Providence in New England, London, 1643, Chap. XXVIII.

⁴*Relations des Jésuites*, Quebec, 1858.

⁵Pierre Boucher, *True and Genuine Description of New France, etc.*, Paris, 1644. Translated under title *Canada in the Seventeenth Century*, Montreal, 1883.

⁶P. Lafitan, *Mœurs des Sauvages Ameriquains, etc.*, Paris, 1724.

⁷Le P. de Charlevoix, *Historie de la Nouvelle France, Journal d'un Voyage, etc.*, Paris, 1744.

⁸Robert Beverly, *History of Virginia*, 1705.

About fifteen years ago the late Rev. J. Owen Dorsey gave the following account of a corresponding game among the Omaha:¹

Jan-čáwa, *Stick-counting*, is played by any number of persons with sticks made of *déska* or *sidúhi*. These sticks are all placed in a heap, and then the players, in succession, take up some of them in their hands. The sticks are not counted until they have been taken up, and then he who has the lowest odd number always wins. Thus, if one player had five, another three, and a third only one, the last must be the victor. The highest number that anyone can have is nine. If ten or more sticks have been taken those above nine do not count.²

Light is thrown upon the origin and significance of these games in America by the account of the *Tiyotipi* of the Dakota, by Stephen R. Riggs. "The exponent of the Phratry was the 'Tiyotipi,' or 'Soldiers' Lodge.' Its meaning is the 'Lodge of Lodges.' There were placed the bundles of black and red sticks of the soldiers. There the soldiers gathered to talk and smoke and feast. There the laws of the encampment were enacted." Describing the lodge, he says:

A good fire is blazing inside, and we may just lift up the skin-door and crawl in. Toward the rear of the tent, but near enough for convenient use, is a large pipe placed by the symbols of power. There are two bundles of shaved sticks about 6 inches long. The sticks in one bundle are painted black and in the other red. The black bundle represents the real men of the camp—those who have made their mark on the warpath. The red bundle represents the boys and such men as wear no eagle feathers.

Again he says:

Then of all the round-shaved sticks, some of which were painted black and some painted red, four are especially marked. They are the four chiefs of the *Tiyotipi* that were made. And these men are not selected at random for this place; but men who have killed many enemies and are most able are chosen.

In conclusion, Mr. Riggs adds:

The special making of the sticks is done on the line of personal history. Whatever is indicated by the kind of eagle feathers a man is entitled to wear in his head, and by the notches in them, this is all hieroglyphed on his stick in the *Tiyotipi*. Then these bundles of sticks are used for gambling. The question is, "Odd or even?" The forfeits are paid in meat for the *Tiyotipi*.

This highly suggestive account reveals the splints or straws of the American games as derived from the ceremonial emblems of the warriors of the tribe. The identity of the splints with the Haida gambling-sticks (No. 76), both in number and method of use, is clearly apparent.

¹ Omaha Sociology, Third Annual Report Bureau of Ethnology, Washington, 1884, p. 338.

² Mr. Francis Le Fleche mentioned an Omaha game to the writer under the name of *Zaně kiđdě*, as played with sticks or straws, fifty-two in all. "It is pretty much like card-playing." Miss Alice C. Flecher writes me that "the true name of the game is *zthon-ni-gki-de*. This is an old word, and not a descriptive name, whereas the name given by Mr. Dorsey is a descriptive name and only sometimes used to designate this game. The name given by Mr. Dorsey, *zhon-dha-wa*, is composed of *zohn*, "wood," and *dha-wa*, "to count."

³ Stephen Return Riggs, *Dakota Grammar, Texts, and Ethnography*, edited by James Owen Dorsey, U. S. Geographical and Geological Survey of the Rocky Mountain Region, Contributions to North American Ethnology, IX, pp. 195, 200.

The latter I have shown to be direct substitutes for arrow-shaftments, hence the derivation of the splints from similar shaftments may be regarded as assured.

66. CHINESE FORTUNE-TELLER'S SIGN. Cotton cloth painted¹ with the *Pát kwá* or "Eight Diagrams." Johore, Malay Peninsula.

67. KWÁ TS' ÍM. Divining-splints.² China and Chinese in the United States.

Thirty-two or sixty-four splints of bamboo, about 5 inches in length, tipped with red (fig. 209). One-fourth of the splints are marked with one dot and called *tán*, "single;" one-fourth with two dots, *chít*, "broken;"

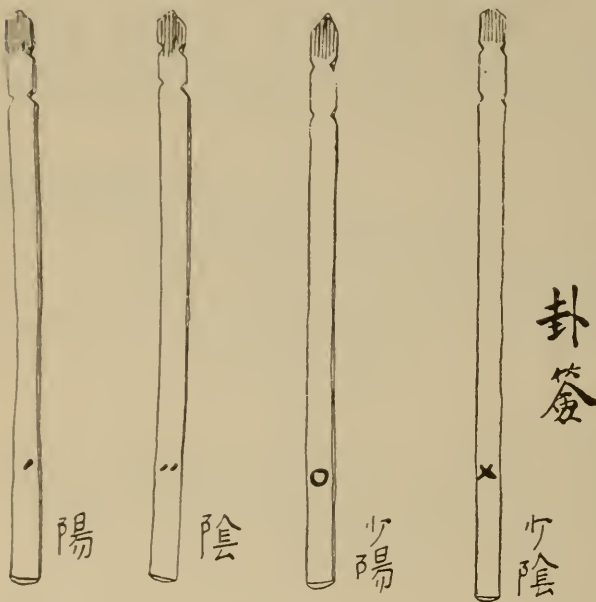


Fig. 209.

DIVINING-SPLINTS (*kwá ts'ím*).

Length, 5 inches.

China.

Cat. No. 175657, U.S.N.M. From Korean Games.

one-fourth with a circle, *ch'ung*, "duplicated," and the remainder with a cross, *káu*, "united." They are regarded, respectively, as *yéung*, "masculine;" *yam*, "feminine;" *shiú yéung* and *shiú yam*, *yam* meaning "assistant." The inquirer draws a splint at random from a vase in which the entire bundle is placed, and the fortune-teller notes its mark upon a piece of paper. Another splint is then drawn, and the result written down just above the former mark, and this repeated until six marks in a line, one above the other, are obtained. The combination is interpreted with the aid of the "Book of Divination,"

by reference to the corresponding diagram, as in *Yeki* (No. 65). In this method of fortune-telling the diagram indicating *place* is determined by the repeated selection of the chance-arrows.

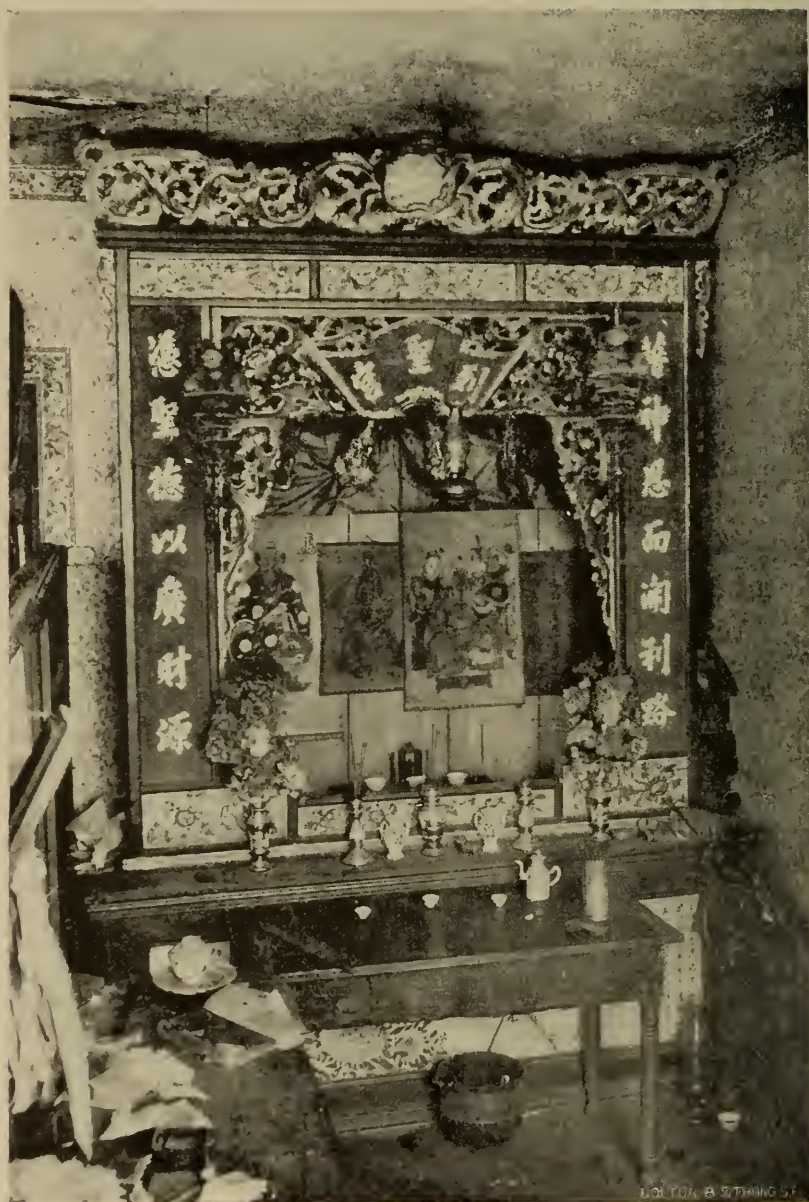
68. MIKUJI. Divining-sticks,³ with box, *mikuji bako*, from which they are thrown. Japan.

Sixty bamboo lots, about 9 inches in length, marked with numbers from one to sixty (fig. 210). Kept in both Shinto and Buddhist temples in Japan. A lot is shaken from a box and its number referred to a book in which an explanation is given. Either sixty or one hundred lots are used. The even numbers are considered lucky and the odd

¹ Cat. No. 16760, Mus. Arch., Univ. Penn. From the collection sent by His Highness the late Sultan of Johore to the Columbian Exposition, Chicago.

² Cat. No. 175657, U.S.N.M. Gift of Stewart Culin.

³ Cat. No. 175658, U.S.N.M. Gift of Stewart Culin.



SHRINE OF CHINESE GOD OF WAR.
Philadelphia.
From Korean Games.

unlucky, with the exception of No. 1, which is very lucky, and No. 100, which is very unlucky.

69. Ts'ím ü. "Lot-answers"¹ in box, *ts'ím t'ung*, from which they are shaken. China and Chinese in the United States.

One hundred bamboo lots, about 10 inches in length (fig. 211), used in Chinese temples and shrines in the same manner as the preceding.

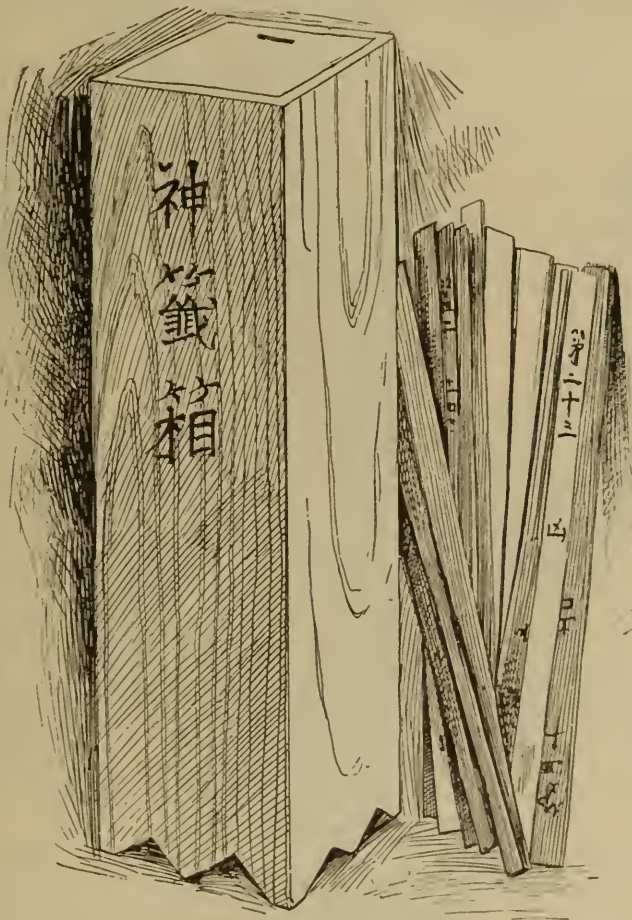


Fig. 210.

DIVINING-STICKS (*mikuji*) WITH BOX (*bako*), FROM WHICH THEY ARE THROWN.

Length of sticks, 9 inches.

Japan.

Cat. No. 18307, Museum of Archaeology, University of Pennsylvania.

These lots illustrate the probable origin of the preceding lots, the Japanese *mikugi*, in the quiver of arrows, the red-tipped, arrow-pointed lots, *ts'ím*, being clearly derived from arrows, *tsín*, while the box, *t'ung*, represents the bamboo quiver.²

¹ Cat. No. 9048, Mus. Arch., Univ. Penn.

² Among the Chinese in the United States the God of War is invariably appealed to in using these lots. They are placed upon the little ledge, or altar before his shrine (Plate 40), which is maintained practically for the purpose of such divination. With the splints are invariably two elliptical pieces of wood, *káu púi* (fig. 212), rounded on one side and flat on the other, usually made of the root stock of the bamboo. The inquirer, after making the usual sacrifices, throws the blocks to

These instruments, taken in connection with a set of arrows worn by a Chinese general, described on page 882, serve to make clear the reference in Ezekiel xxi, 21, where Nebuchadnezzar, at the parting of two ways, uses divination with arrows to decide whether he shall proceed against Jerusalem or Rabbah.¹

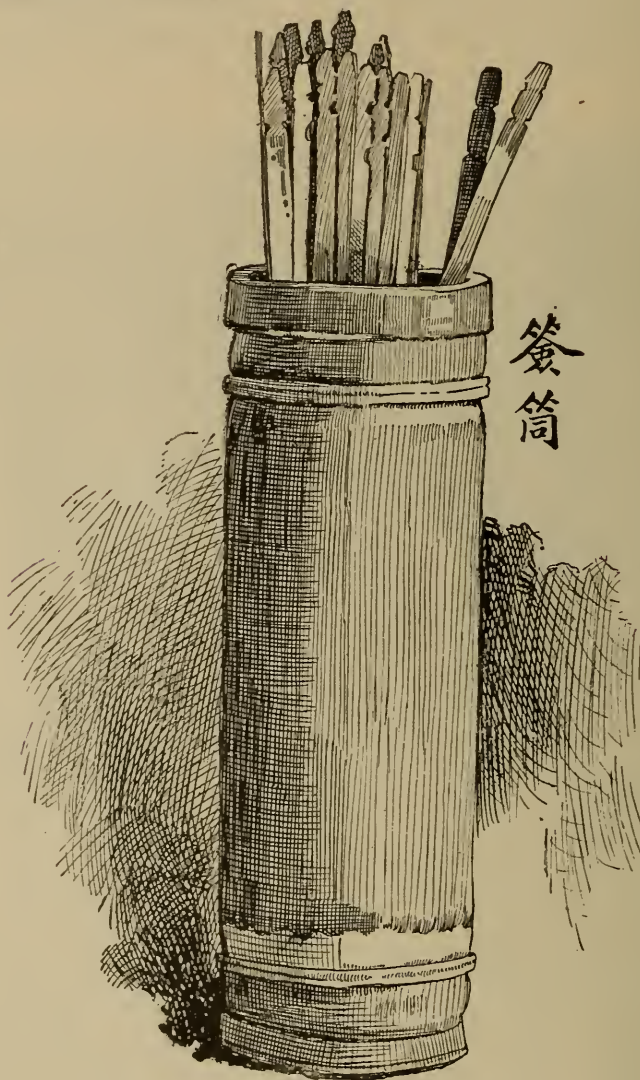


Fig. 211.

ROW-LOTS (*ts'im ü*) IN BOX (quiver).

Length of sticks, 10 inches.

Canton, China.

Cat. No. 9048, Museum of Archaeology, University of Pennsylvania.

Analogous to the *ts'im ü* was the *Meisir* game of the heathen Arabs,

ascertain whether the time is propitious for divination with the *ts'im ü*. In tossing the blocks, if both fall with their curved sides uppermost the indication is a negative one, neither good or evil; if both fall with the flat sides uppermost the indication is unfavorable; if one falls with the curved side uppermost and the other the reverse the indication is good. It is customary to throw the blocks until they fall three times alike in succession.

¹“For the king of Babylon stood at the parting of the ways, at the head of two ways, to use divination. *He shook the arrows to and fro*, he consulted the teraphim, he looked in the liver” (R. V.).

in which marked arrows were shaken from a quiver. Ten or eleven arrows were used, of which seven were marked. They were made of the wood of a particular tree, and were of a yellow color. The seven marked arrows which had distinguishing notches on the shaftment were each designated by a name.

A very complete account of the game is given by Dr. Anton Hüber,¹ of which an extract is to be found in Korean Games, XXXIII.



Fig. 212

DIVINING-BLOCKS (*káu pui*).Length, $6\frac{1}{2}$ inches.

China.

Cat. No. 9047, Museum of Archaeology, University of Pennsylvania.

It should be observed that the term *al maisar* (*meisir*) is now understood to include all games of chance or hazard.² The heathen Arabs were accustomed to divine by means of arrows in a manner similar to the *Meisir*, of which an account is found in the Preliminary Discourse to Sale's Koran.³

¹ Über das Meisir genannte Spiel der heidnischen Araber, Leipzig, 1883.

² Hughes' Dictionary of Islam.

³ Another practice of the idolatrous Arabs, forbidden also in one of the above-mentioned passages (Koran, Chap. V), was that of divining by arrows. The arrows used by them for this purpose were like those with which they cast lots, being without heads or feathers, and were kept in the temple of some idol, in whose presence they were consulted. Seven such arrows were kept at the temple of Mecca, but generally in divination they made use of three only, on one of which was written, "My Lord hath commanded me;" on another, "My Lord hath forbidden me," and the third was blank. If the former was drawn, they looked upon it as an approbation of the enterprise; if the second, they made a contrary conclusion; but if the third happened to be drawn, they mixed them and drew them over again. These divining arrows were generally consulted before anything of moment was undertaken, as when a man was about to marry, or about to go on a journey. (The Preliminary Discourse, Sec. V.)

While the Chinese lots at the present day are inscribed simply with a number referring to the corresponding pages of a book (as No. 70), in which is to be found both the oracle and its explanation, it is not unlikely that the oracle was originally engraved or written upon the lot itself, such lots being the natural outcome from the engraved or painted arrow shaftment, from which I assume they were derived. An explanation of the origin of the *sortes* of the Romans is naturally suggested. The *sortes* were little tablets or counters of wood, or other materials, upon each of which some rough verse or proverb was written. After they had been mixed together a boy would draw one at random, which was then taken as an omen.¹ Cicero² describes the *Sortes* at Præneste as being engraved in ancient characters on oak, and kept in a chest of olive wood.

70. KWÁN TAI LING TS'ÍM.³ "God of War Divining Lots." Canton, China.

Book of lots, to which the numbered lots are referred.

71. PÁK KÒP P'ÍÚ TS'ÍM Ü.⁴ Lots cast by gamblers. Canton, China.

Eighty bamboo lots, identical with No. 69, except that they are numbered from one to eighty. Cast by gamblers before playing in the lottery called the *Pák kòp p'íú* (No. 72) to determine the numbers they should play. Kept in Chinese shrines of the God of War in China and the United States for the convenience of gamblers.

These lots, which are used ceremonially to divine the lucky numbers, are doubtless survivals from the time when such lots were actually used in the drawings. In Korea, lotteries called *San-htong*, appear to be a distinct outcome from the *kyei*, or money-lending clubs. In the latter a hundred men each contribute a certain sum monthly, the drawings being made with numbered wooden balls, which are shaken from a globular wooden box, *san-htong*.⁵ The lotteries are drawn in the same manner, and it should be observed that the name of the box, *san-htong*, is the Chinese *ts'ím t'ung*, applied to the lot-arrows in their quiver. The globular box and numbered balls are analogous to the Italian lottery, in which numbered balls (No. 74) are shaken from a bottle-shaped basket.

¹ Smith's Dictionary of Greek and Roman Antiquities, art. *Sortes*.

² De Divinatio, II, p. 41.

³ Cat. No. 15398, Mus. Arch., Univ. Penn.

⁴ Cat. No. 9048, Mus. Arch., Univ. Penn.

⁵ The implements for a Korean lottery (Cat. No. 17612) in the University Museum consist of a small tin lamp for burning kerosene oil, containing ten white nuts (seeds of *Salisburia adiantifolia*) numbered with Chinese characters from one to ten, an evident makeshift for the appliance described in the text.

Himly gives the Manchu name for the money-lending clubs as *isangga mekten*, "lot drawing," with the Chinese equivalent of *iú ui*, "shaking society." When several persons each deposit part of the money, and it is divided by lot-drawing once a month, it is called *isangga mekten*.

72. PÁK KÒP P'ÍÚ. "White Pigeon Ticket." Tickets used by players¹ (fig. 213). A lottery. China and Chinese in the United States.

Carried on by organized companies among the Chinese in China and in their settlements in the United States. The tickets are marked with eighty numbers, which are represented by the first eighty characters of the "Thousand Character Classic." The players bet on ten or more numbers, marking the characters selected on the tickets. The draw-

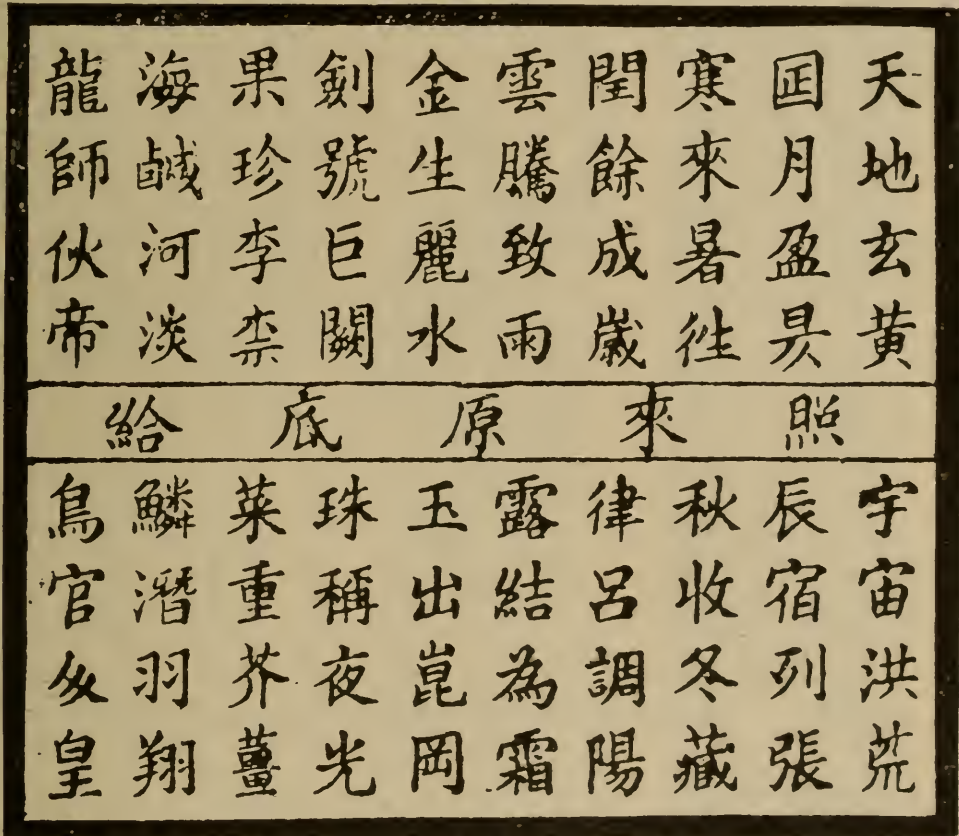


Fig. 213.

LOTTERY TICKET (*pák kòp p'íú*).

Impression, $3\frac{5}{8}$ inches square.

Chinese in United States.

Cat. No. 169327, U.S.N.M. From Korean Games.

ings are conducted by means of eighty pieces of paper, each having one of the eighty characters written upon it. Twenty characters are drawn at random at each drawing, and the players win in proportion to the number they guess.² The name of the lottery, *pák kòp*, "White Pigeon," is probably a slang phrase for *pák hòp*, meaning "one hundred united," a name which is quite intelligible in the light of the Korean money-lending clubs.

¹ Cat. No. 169327, U.S.N.M. Gift of Stewart Culin.

² Stewart Culin, for detailed account see *The Gambling Games of the Chinese in America*, Philadelphia, 1891.

A lottery similar to the preceding. The lots are the names of thirty-six persons, and appear upon the chart (fig. 214) arranged in nine categories:



Fig. 214.
CHART FOR WORD-BLOSSOMING LOTTERY (*tsz' fá t'ò*).
Impression, 8 by 9 inches.
China, and Chinese in United States.
Cat. No. 16932s, U.S.N.M. From Korean Games.

1. The four *Chong ün*.²
2. The seven successful merchants.
3. The four Buddhist priests.
4. The five beggars.
5. The five generals.
6. The four ladies.
7. The four destined to good fortune.
8. The nun.
9. The two Taoist priests.

¹ Cat. No. 169328, U.S.N.M. Gift of Stewart Culin.

²The name given to those who take the highest degree at the examinations for the Hanlin.

One name is selected as the winning one before each drawing, and the players who guess it receive thirty times the amount of their bet. Below each of the proper names on the chart are the names of various animals, common occupations, of noted characters in the popular romances and histories, and of miscellaneous objects, such as "jade," "a corpse," and the "Tutelary Spirit." This heterogeneous collection, which somewhat resembles the list of objects in the dream books sold in our shops for the use of "policy" players, is employed by gamblers for a similar purpose. The picture of a man, marked with thirty-six names at various parts of his body, forms part of the same scheme. This employment is secondary to another purpose. Before drawing the lottery, the manager distributes among the players copies of an enigma (fig. 215), which must contain some demonstrable reference to the name written under the proper name selected for the day, or to the part of the body upon which that name is written. These enigmas are written in metrical form, and are composed as required by the writer of the lottery. He endeavors to mislead the players, but is obliged to give a satisfactory explanation of the connection between his verses and the name displayed.¹

For an explanation of the symbolism of the thirty-six names and of the *T'ung yan*, or "composite man," as the picture of the man is called, we need but to refer to the concept of totality which underlies the arrow-quiver with its symbols of all the quarters.

74. NUMBERED BALLS,² used in lottery.
Madrid, Spain.

These balls (fig. 216) made of boxwood, are numbered from one to ninety. Their probable origin is suggested by the Korean *san-htong*, as described on page 902. The resemblance of these strung balls to a rosary has suggested to the writer that that object may have had a similar origin and cosmical symbolism.

75. ARROWS.³ McCloud River Indians, McCloud River, California.

Feathered ends marked with rings or ribbons of red, blue, and black paint.

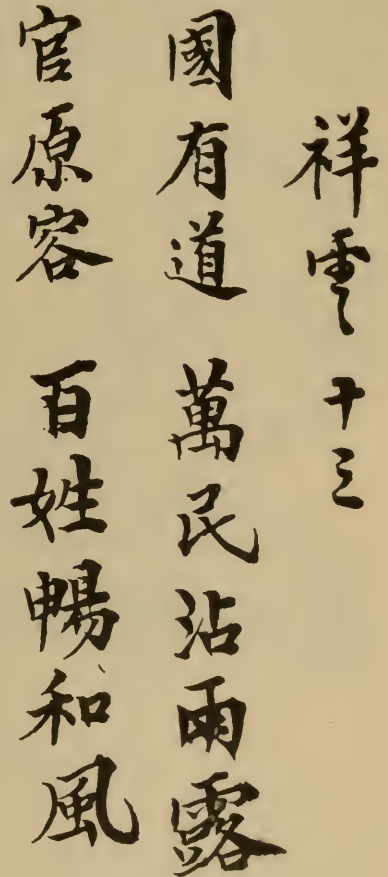


Fig. 215.

ENIGMA (*tsz' fá t'ai*) USED IN WORD-
BLOSSOMING LOTTERY.

Chinese in United States.

From Korean Games.

¹ For a detailed account see Stewart Culin, *Tsz' Fá*, or Word-Blossoming, Overland Monthly, September, 1894.

² Cat. No. 16247, Mns. Arch., Univ. Penn.

³ Cat. No. 126518, U.S.N.M.

Intended to illustrate method of marking arrows referred to on page 881.

76. GAMBLING-STICKS. Alaska Indians.

(a) A set of sixty-two sticks, 5 inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch.¹ Marked with stripes or ribbons of red and black paint, of various widths, and variously placed. Collected by Dr. A. H. Hoff, U. S. A.

(b) Plaster cast of stick, showing carved figure of beaver. Copy of one of set in the United States National Museum² (Plate 41), Haida Indians, Queen Charlotte Islands, British Columbia.



Fig. 216.

STRING OF NINETY LOTTERY BALLS.

Madrid, Spain.

Cat. No. 16247, Museum of Archaeology, University of Pennsylvania.

which is as fine as tow and kept constantly near him, he divides the pins into two parcels, which he wraps up in the bark, and passes them rapidly from hand to hand under the tow, and finally moves them round on the ground or mat on which the players are always seated, still wrapped in the fine bark, but not covered by the tow. His opponent watches every move that is made from the very first with the eagerness of a cat, and finally, by a motion of his finger, indicates which of the parcels the winning stick is in. The player, upon such indication, shakes the sticks out of the bark, and, with much display and skill, throws them one by one into the space between the players till the piece wanted is reached, or else, if it is not there, to show that the game is his. The winner takes one or more sticks from his opponent's pile, and the game is decided when one wins all the sticks of the other.

Dr. Franz Boas,⁴ in his Report of the Northwestern Tribes of Canada, 1895, gives the following account of the methods of play among the Niskká (Chimmesyan):

Qsan.—Guessing game, played with a number of maple sticks marked with red or black rings, or totemic designs. Two of these sticks are trumps. The object of the

Mr. James G. Swan³ gives the following account of the method of play:

The Haida use sticks or pieces of wood 4 or 5 inches long and beautifully polished. They are made of yew, and each stick has some designating mark upon it. There is one stick entirely colored and one entirely plain. Each player will have a bunch of forty or fifty of these sticks, and each will select either of the plain sticks as his favorite, just as in backgammon or checkers the players select the black or white pieces. The Indian about to play takes up a handful of these sticks, and, putting them under a quantity of finely separated cedar bark,

¹ Cat. No. 9286, U.S.N.M.

² Cat. No. 73552, U.S.N.M.

³ Smithsonian Contributions to Knowledge, No. 267, p. 7.

⁴ British Association for the Advancement of Science, Ipswich, 1895.

EXPLANATION OF PLATE 41.

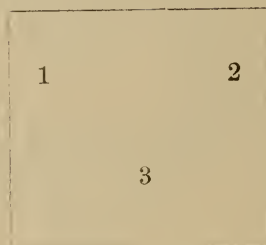


Fig. 1. HAIDA INDIAN GAMBLING STICK. Length, $4\frac{3}{4}$ inches.
(Cat. No. 73552, U. S. N. M.)

Fig. 2. DEVICE ON HAIDA INDIAN GAMBLING STICK (Beaver). From Korean Games.

Fig. 3. CYLINDRICAL STAMP. Length, 3 inches.
(Cat. No. 12983, Mus. Arch., Univ. Penn. Ecuador.)



HAIDA GAMBLING STICK AND POTTERY STAMP.
Ecuador.

game is to guess in which of the two bundles of sticks, which are wrapped in cedar bark, the trump is hidden. Each player uses one trump only.

Another apparently similar game he describes as follows:

Matsqá'n.—About thirty small maple sticks are divided into four or five lots of unequal numbers. After a first glance one of the players is blindfolded, the others change the order of the lots, and the first player must guess how many sticks are now in each lot. When he guesses right in three, four, or five guesses out of ten—according to the agreement of the players—he has won.

The sets of sticks are almost uniformly contained in a leather pouch, with a broad flap, to which a long thong is attached, passing several times around the pouch and having a pointed strip of bone, horn, or ivory at the end. The latter is slipped under the thong as a fastening. These sticks, which are used by several of the tribes of the northwest coast of America, are probably simply conventionalized shaftments of arrows, as will be seen by comparing them with the arrows of the McCloud River Indians (No. 75). Fig. 217 represents the cut shaftment of an actual arrow, still bearing bands of red paint, found among the débris of a cliff dwelling in Mancos Canyon, which Mr. Cushing regards as having been intended for a game in the manner of the sticks.

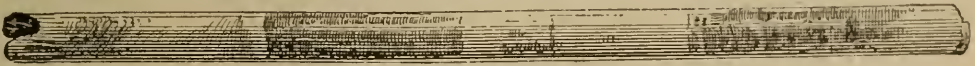


Fig. 217.

CUT ARROW SHAFTMENT.

Length, 6 inches.

Cliff dwelling in Mancos Canyon, Colorado.

Museum of Archaeology, University of Pennsylvania.

From the account of the sticks used among the Dakota (p. 897), to which the Northwest Coast sticks are analogous, it seems probable that each stick in a set stands, or originally stood, for a warrior of the tribe. It will be seen from the sticks collected by Lieutenant Emmons that they are designated by what appear to be the names of the gentes. Comparison of the sticks herein described show that no two sets are exactly alike,¹ a variation which, under the circumstances, would be natural. Through the courtesy of Dr. Franz Boas, of the American Museum of Natural History, New York City, I am able to give the following list of two sets of sticks² in that museum, collected and labeled by Lient. George T. Emmons, U. S. N., which are of the highest importance in their study. By reference to Gibb's Vocabularies, it appears they were obtained from the Taku tribe of the Koluschan family, occupying Taku Inlet, Alaska.³ They are catalogued under the name of *Alh-kar*, from Sitka.

¹ There is a general agreement in the red and black ribbons, but the number and arrangement of these varies on the sticks in each set. Several sticks marked alike frequently occur, as in the named sets collected by Lieutenant Emmons. All of the painted sets contain sticks like those in these two sets.

² My attention was called to these sticks by my friend Mr. Cushing, who kindly placed his drawings of them at my disposal.

³ United States Geographical and Geological Survey of the Rocky Mountain Region. Contributions to North American Ethnology, I, p. 121.

Set of fifty-seven polished maple gaming-sticks. (Cat. No. $\frac{E}{558}$), $4\frac{15}{16}$ inches in length, in leather pouch. All marked with red and black ribbons, and arranged in fifteen groups, as follows:

Eight designated as *Kitē*, "blackfish."
 One as *Tieesh sakh'*, "starfish."
 Four as *Kah*, "duck."
 Ten as *Late-la-ta*, "sea gull."
 Four as *Nork*, "sunfish."
 Four as *Shuuko*, "robin."
 Four as *Heon*, "fly."
 Three as *Kar-shish-show*, "like a dragon-fly."
 Three as *Tseeke*, "black bear."
 Three as *Gowh*, "surf duck."
 Four as *Larkar*.
 Three as *Yah-ah-un-a*, "South Southerlee (*sic*)."
 Three as *Ihk-ok-kohm*, "cross-pieces of canoe."
 Two as *Kea-thlu*, "dragon-fly."
 One as *Tis*, "moon."

Set of sixty-six polished wooden gaming-sticks. (Cat. No. $\frac{E}{600}$), $4\frac{15}{16}$ inches in length, in leather pouch. Twenty-seven of these sticks are marked with red and black ribbons, and arranged in nine groups, as follows (Plates 42, 43):

Four designated as *Kitē*, "blackfish." (Plate 42A.)
 Three as *Lar-ish*, "four-pronged starfish." (Plate 42B.)
 Three as *Kok-khatete*, "loon." (Plate 42C.)
 Three as *Tuk-kut-ke-yar*, "humming-bird." (Plate 42D.)
 Three as *Kark*, "duck" (golden eye). (Plate 42E.)
 Three as *Dulth*, a bird like a heron without topknot. (Plate 42F.)
 Three as *Kau-kon*, "sun." (Plate 42G.)
 Three as *Ars*, "stick-tree." (Plate 42H.)
 Two as *Ta-thar-ta*, "sea gull." (Plate 42J.)

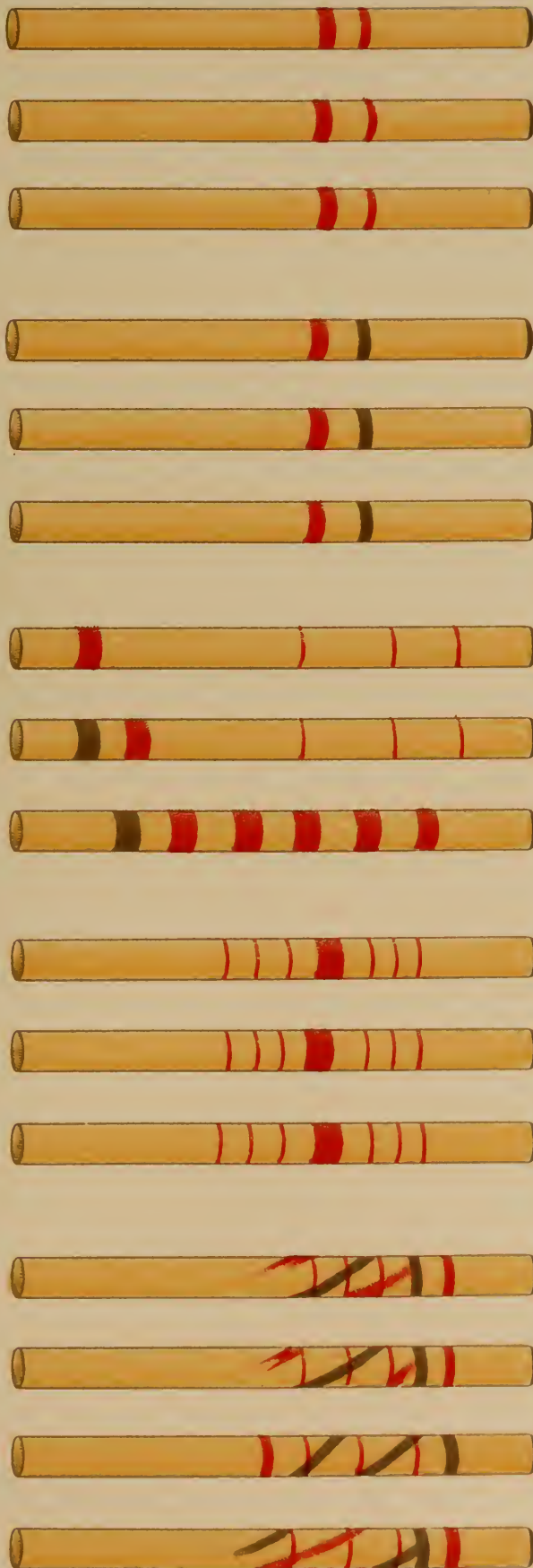
The remaining thirty-eight sticks are plain, but some show old bands, obliterated, but not removed, while two are inlaid with a small, rectangular piece of black horn (Plate 42 K), and one with a small ring of copper wire.

The following additional sets of sticks are contained in the American Museum of Natural History, New York City:

Set of forty-three maple gambling sticks. (Cat. No. $\frac{E}{596}$), $5\frac{4}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. One plain, others marked with red and black ribbons. Ends nipple-shaped. Tlingit; Fort Wrangell, Alaska. Collected by Lieut. George T. Emmons.

Set of forty-six wooden gambling-sticks. (Cat. No. $\frac{E}{599}$), $5\frac{1}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons. Ends flat, blackened by charring. Tlingit; Sitka, Alaska. Collected by Lieut. George T. Emmons.

Set of sixty-two polished maple gambling-sticks (Cat. No. $\frac{E}{601}$), $4\frac{4}{16}$ inches in length and $\frac{4}{16}$ inch in diameter, in leather pouch. Painted with red and black ribbons, in part inlaid with abalone shell. One



A

B

C

D

E

TAKU INDIAN GAMBLING STICKS ALASKA.

Length $4\frac{5}{8}$ inches. No. E, American Museum of Natural History, New York.



F



G



H



J



K

TAKU INDIAN GAMBLING STICKS. ALASKA.

Length $4\frac{5}{8}$ inches. No. E, American Museum of Natural History, New York.

carved with head of a man. Ends ovate. Tlingit; Sitka, Alaska. Collected by Lieut. George T. Emmons.

Set of sixty-seven maple gambling-sticks (Cat. No. $\frac{E}{602}$), $4\frac{1}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons. Ends ovate. Tlingit; Sitka, Alaska. Collected by Lieut. George T. Emmons.

Set of forty-three wood gambling-sticks (Cat. No. $\frac{E}{603}$), $4\frac{1}{16}$ inches in length and $\frac{1}{16}$ inch in diameter, in leather pouch. Twenty-two painted with red and black ribbons; others plain. Ends have small raised flat disk. Collected by Lieut. George T. Emmons.

Sixteen maple gambling-sticks (Cat. No. $\frac{E}{1019}$), $4\frac{3}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, marked with red and black ribbons, and six with burnt totemic designs. Ends ovate. With the above are ten odd sticks belonging to six or seven different sets. Chilkat. Collected by Lieut. George T. Emmons.

Set of fifty-three wood gambling-sticks (Cat. No. $\frac{E}{1058}$), $4\frac{1}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons, and having each end incised with three crescent-shaped marks suggesting a human face. In part inlaid with small pieces of abalone shell and small rings of copper wire. Ends flat. Stahkin. Collected by Lieut. George T. Emmons.

Set of forty-nine wood gambling-sticks (Cat. No. $\frac{E}{2274}$), $3\frac{3}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. All painted with red and black ribbons. Ten inlaid with small pieces of abalone shell, copper, and horn. Ends flat. Tlingit; Fort Wrangell. Collected by Lieut. George T. Emmons.

Set of sixty maple gambling-sticks (Cat. No. $\frac{16}{682}$), $5\frac{1}{16}$ inches in length and $\frac{7}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons. Haida. Collected by Dr. J. W. Powell.

Set of eighty-eight wood gambling-sticks (Cat. No. $\frac{16}{683}$), 5 inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. All painted with red and black ribbons. Two sticks carved at one end with human heads, one having right arm and leg of human figure below and the other their complement. Ends flat. Single-pointed paint-stick in pouch. Haida. Collected by Dr. J. W. Powell.

Set of fifty-four light-colored wood gambling-sticks (Cat. No. $\frac{16}{744}$), about $4\frac{1}{16}$ inches in length and $\frac{5}{16}$ inch in diameter. Length slightly irregular. In leather pouch. All marked with red and black ribbons. Ends flat. Double-pointed paint-sticks, one end red, other black, in pouch. Bellabella. (Wakashan.) Collected by Dr. J. W. Powell.

Set of seventy-two wood gambling-sticks (Cat. No. $\frac{16}{744}$), $5\frac{1}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons and burnt totemic designs. Ends hollowed. Paint-stick in pouch. Bellabella. Collected by Dr. J. W. Powell.

Set of sixty-one wood gambling-sticks (Cat. No. $\frac{16}{785}$), $5\frac{3}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. Three plain; others

painted with red and black ribbons. Four inlaid with small disks and rectangles of abalone shell. Ends nipple-shaped and inset with disks of abalone shell. Tsimshian. Collected by Dr. Franz Boas.

Set of sixteen willow gambling-sticks (Cat. No. $\frac{16}{944}$), $5\frac{6}{16}$ inches in length and $\frac{3}{16}$ inch in diameter, in small fringed buckskin pouch, stitched with an ornamental figure in red and green silk. All marked with ribbons of red paint. Nslakyapamuk (Thompson River Indians Salishan) Interior of British Columbia. Collected by Mr. James Teit.

The following sets of sticks are in the Museum of Archæology of the University of Pennsylvania:

Set of forty alder wood gambling-sticks (Cat. No. 15322), $4\frac{5}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. In part marked with red and black ribbons, in part with obliterated ribbons, and in part plain. Ends hollow, showing pith. Originally filled with some white substance. Northern Alaska. Collected by Lieut. Miles C. Gorgas, U. S. N.

Set of forty-four polished maple gambling-sticks (Cat. No. 15491), $4\frac{3}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons. Ends flat.

Set of forty-seven alder wood gambling-sticks (Cat. No. 15492), $5\frac{2}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. Thirty-two are marked with red and black ribbons and fifteen are plain. Ends inset with shell beads. Two banded sticks from another set are also contained in the pouch.

Set of sixty-three polished birch or larch wood gambling-sticks (Cat. No. 18372), $5\frac{3}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons. Ends flat.

The following sets of sticks are in the Field Columbian Museum, Chicago.¹

Set of fifty-five wood gambling-sticks (Cat. No. 18349), $4\frac{3}{4}$ inches in length, in leather pouch. Variously figured. Ends rounded. Bella coola; British Columbia. Collected by Dr. Franz Boas.

Set of twenty-four wood gambling-sticks (Cat. No. 18348), $4\frac{1}{2}$ inches in length, in leather pouch. Twenty-one painted in various ways, and three carved to represent human figure. Bellacoola; British Columbia. Collected by Dr. Franz Boas.

Set of forty-two wood gambling-sticks (Cat. No. 18350), $4\frac{3}{4}$ inches in length, in leather pouch. Variously marked with colored ribbons. Ends rounded. Bellacoola; British Columbia. Collected by Dr. Franz Boas.

Set of sixty-five wood gambling-sticks (Cat. No. 19017), $4\frac{5}{8}$ inches in length. Marked with colored ribbons. Ends rounded. Kwakiutl. Collected by Dr. Franz Boas.

¹ I am indebted to Prof. William H. Holmes for the detailed information here given.

Set of sixty-one wood gambling-sticks (Cat. No. 14396), $4\frac{3}{4}$ inches in length, in leather pouch. Variously marked with colored ribbons. Ends flat. No tribe; no locality. Ayer collection.

Set of fifty-seven wood gambling-sticks (Cat. No. 14395), 5 inches in length, in leather pouch. Five inlaid with abalone shell, one with two small round pieces near middle, one with a single piece near the middle, and three with a single piece near the end. Ends flat. Alaska. Ayer collection.

Set of forty-three wood gambling-sticks (Cat. No. 14397), $4\frac{3}{4}$ inches in length, in leather pouch. Variously figured in color. No tribe; no locality. Ayer collection.

The following sets of sticks are in the United States National Museum:

Set of thirty-one alder-wood gambling-sticks (Cat. No. 9939), 5 inches in length and $\frac{7}{16}$ inch in diameter, in leather pouch. Sixteen marked with red and black ribbons and twelve unpainted. Three of the latter are inlaid with a piece of abalone shell. Ends hollow. Sitka, Alaska. Collected by Captain Henriques.

Set of forty-five whitewood gambling-sticks (Cat. No. 10311), $4\frac{7}{8}$ inches in length and $\frac{4}{16}$ inch in diameter. With one exception marked with fine and deep lines cut in the wood—in part with red and black painted ribbons, and eighteen with a threefold oblique-spiral ribbon lightly burned around the stick. Ends flat. British Columbia (Nisse River). Collected by Lieut. F. W. King, U. S. A.

Set of forty-four polished wood gambling-sticks (Cat. No. 11389), $5\frac{3}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. Sixteen marked with red and black ribbons and the remainder plain. Ends slightly pointed. Sitka, Alaska. Collected by Mr. Vincent Colyer.

Thirty-four wood gambling-sticks (Cat. No. 46487), parts of three sets. Ten $4\frac{3}{4}$ inches, fifteen $5\frac{1}{16}$ inches, and nine $5\frac{1}{2}$ inches in length. All marked with black and red ribbons. Chilkat. Collected by Commander L. A. Beardslee, U. S. N.

Set of fifty-eight wood gambling-sticks (Cat. No. 45974), 5 inches in length and $\frac{6}{16}$ inch in diameter, in pouch of woven grass. All painted with red and black ribbons, in part obliterated. Ends hollow. Sitka, Alaska. Collected by Mr. John J. McLean.

Set of forty-seven cedar and spruce gambling-sticks (Cat. No. 60223), $5\frac{2}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. Forty-five marked with red and black ribbons; in part obliterated, remainder plain. Ends ovate. Alaska. Collected by Mr. John J. McLean.

Set of sixty-nine polished wood gambling-sticks (Cat. No. 67899), $4\frac{15}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. Fifty-six marked with red and black ribbons and thirteen plain. The pouch also contains an odd stick from another set. Ends slightly pointed. Chilkat; Alaska. Collected by Mr. John J. McLean.

Set of fifty-five cedar gambling-sticks (Cat. No. 74258), 5 inches in length and $\frac{5}{16}$ in diameter, in leather pouch. Thirty marked with red and black ribbons and twenty-five plain. Ends flat. Alaska. Collected by Mr. John J. McLean.

Set of thirty-three spruce gambling-sticks (Cat. No. 75422), $5\frac{1}{16}$ inches in length and $\frac{1}{16}$ inch in diameter, in leather pouch. Thirty-three marked with red and black ribbons, and all, with three exceptions, inlaid with from one to nine¹ strips of abalone shell of a variety of patterns—round, oval, rectangular, crescent, leaf-shaped, and triangular. Three have nearly obliterated outline paintings of animal designs, and two are deeply carved, one with a human head, painted red, near both ends, and the other with a single head, similarly painted, and having a flat labret of abalone shell inserted. Ends nipple-shaped. The inner side of the flap of the pouch is painted in green, red, and black, with a conventional animal. Sitka, Alaska. Collected by Mr. John J. McLean.

Set of sixty-eight wood gambling-sticks (Cat. No. 75423), $4\frac{3}{4}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons. Ends flat, inset with small disks of abalone shell. Sitka, Alaska. Collected by Mr. John J. McLean.

Set of fifty-seven bone gambling-sticks (Cat. No. 67909a), $4\frac{1}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, with hole drilled near one end for stringing. All engraved with fine encircling lines. One is inset with rectangular strip of abalone shell and one with rectangular piece of ivory, and has another hole, similarly shaped, from which the ivory has been removed. Six others have deep square and triangular holes for the insertion of slips of ivory or shell, and twelve are engraved with conventional animal designs, of which five have holes for the insertion of ivory eyes. Ends flat. Chilkat; Alaska. Collected by Mr. John J. McLean.

Set of thirty-nine bone gambling-sticks (Cat. No. 67909b), $4\frac{1}{16}$ inches in length and $\frac{4}{16}$ inch in diameter, with hole drilled near one end for stringing. All engraved with fine encircling lines. One has two deep rectangular holes for the insertion of abalone shell, which has been removed. One has row of three dots and three dotted circles. Four are engraved with conventional animal designs. Chilkat; Alaska. Collected by Mr. John J. McLean.

Set of forty-two bone gambling-sticks (Cat. No. 75421), $4\frac{3}{16}$ inches in length and $\frac{3}{16}$ inch in diameter. All engraved with fine encircling lines. One has deep hole with a slip of abalone shell inserted, and four have similar holes from which shell has been removed. Five of the sticks are fragmentary, and the tips of many apparently show the action of fire. Ends flat. Alaska. Collected by Mr. John J. McLean.

¹ Seventeen with one, four with two, five with three, one with four, one with five, and one with nine pieces. When placed upon a smooth surface the weight of the shell causes the sticks to turn so that the inserted pieces are concealed.

Set of sixty-six¹ curly-grained cedar-wood gambling-sticks (Cat. No. 18908), $5\frac{1}{16}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. All, with one exception, marked with red and black ribbons. Ends ovate. Sitka, Alaska. Collected by Mr. J. G. Swan.

Set of thirty polished wood gambling-sticks (Cat. No. 18936), 5 inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. Fifteen painted with red and black ribbons and fifteen plain. Ends flat. Sitka, Alaska. Collected by Mr. J. G. Swan.

Set of thirty-four swamp or spotted beech or hazel gambling-sticks (Cat. No. 20789), $4\frac{1}{8}$ inches in length, $\frac{7}{16}$ inch in diameter, in leather pouch. All marked with red and black ribbons and five inlaid with from one to three strips of abalone shell, rectangular, round, crescent, and triangular. Ten of the sticks not having shell inserted have lengthwise cracks filled with metallic iron. Ends nipple-shaped. Sitka, Alaska. Collected by Mr. J. G. Swan.

Set of fifty-one polished wood gambling-sticks (Cat. No. 20790), $4\frac{1}{8}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. Nineteen marked with red and black ribbon and thirty-two plain. Ends flat. Sitka, Alaska. Collected by Mr. J. G. Swan.

Set of forty-six polished wood gambling-sticks (Cat. No. 89074), $5\frac{4}{16}$ inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. Forty-three marked with red and black ribbons and three plain. Ends have small flat annular projection. Queen Charlotte Islands, British Columbia. Collected by Mr. J. G. Swan.

Set of fifty maple gambling-sticks (Cat. No. 89180), 5 inches in length and $\frac{6}{16}$ inch in diameter, in leather pouch. All painted with red and black ribbons. Ends flat. Skidgate, British Columbia. Collected by Mr. J. G. Swan.

Set of sixty-four redwood cedar gambling-sticks (Cat. No. 20646), $5\frac{1}{4}$ inches in length and $\frac{1}{2}$ inch in diameter, in leather pouch, the inside of which is painted with figure of an animal. All painted with red and black ribbons. Bellabella; British Columbia. Collected by Mr. J. G. Swan.

Set of fifty-six maple gambling-sticks (Cat. No. 20647), $5\frac{1}{4}$ inches in length and $\frac{1}{2}$ inch in diameter, in leather pouch. All painted with red and black ribbons, and nineteen² inset with abalone shell in designs of circles, crescents, triangles, and rectangles. Ends flat. Fort Simpson, British Columbia. Collected by Mr. J. G. Swan.

Set of fifty-three curly-maple gambling-sticks (Cat. No. 88804), $5\frac{1}{4}$ inches long and $\frac{3}{16}$ inch in diameter, in leather pouch. All painted with red and black ribbons. One inlaid with one and another with two small rectangles of abalone shell. Queen Charlotte Islands, British Columbia. Collected by Mr. J. G. Swan.

¹ Catalogued as 68.

² Nine with one, six with two, and four with three pieces.

Set of thirty-two polished birch-wood gambling-sticks (Cat. No. 73522), $4\frac{3}{4}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch, beautifully carved with designs in intaglio. Ends flat. Haida Mission, Jackson, Alaska. Collected by Mr. J. Loomis Gould in 1884.

Set of twenty-seven wood gambling-sticks (Cat. No. 6556), $4\frac{7}{8}$ inches in length and $\frac{1}{16}$ inch in diameter, in leather pouch. Carved with incised designs similar to, but not identical with, preceding. Sitka, Alaska. Collected by Mr. T. T. Minor.

The following sets are in the Peabody Museum of American Archaeology and Ethnology, Cambridge, Massachusetts:

Set of forty-two wooden gambling-sticks (Cat. No. 203), $4\frac{1}{2}$ inches in length and $\frac{5}{16}$ inch in diameter, in leather pouch. Painted with red and black ribbons. Ends flat. Northwest Coast.

Thirty-seven wooden gambling-sticks (Cat. No. 203a), $4\frac{3}{4}$ inches in length and $\frac{5}{16}$ inch in diameter. Painted with red and black ribbons. Ends flat. Northwest Coast.

Seventeen wooden gambling-sticks (Cat. No. 203b), $4\frac{1}{2}$ inches in length and $\frac{5}{16}$ inch in diameter. Painted with red and black ribbons. Ends nipple-shaped. Northwest Coast.

Set of fifty-three wooden gambling-sticks (Cat. No. 1717), $4\frac{5}{8}$ inches in length and $\frac{3}{8}$ inch in diameter, in buckskin bag. Painted with red and black ribbons. Ends slightly rounded. Said to be Kolushan. Sitka, Alaska. Collected by Mr. E. G. Fast.

Set of forty-three wooden gambling sticks (Cat. No. 1718), $5\frac{1}{2}$ inches in length and $\frac{3}{8}$ inch in diameter, in a buckskin bag. Twelve are inlaid with halotis shell and the majority of the sticks are painted and burned. Ends rounded. Said to be Kolushan. Sitka, Alaska. Collected by Mr. E. G. Fast.

Set of fifty-one wooden gambling-sticks (Cat. No. 48395), $5\frac{1}{8}$ inches in length and $\frac{1}{4}$ inch in diameter. Painted with red and black ribbons. Ends rounded. Collected by Mr. E. G. Fast.

Museum No.	Number of sticks.	Material.	Design.	Ends.	Length.	Diameter.	Tribes.	Linguistic stock.	Place collected.	Collector.
9286	62	Wood	Painted.	.....	<i>Inches.</i> 5	<i>Inch.</i> $\frac{1}{16}$	.....	.....	Alaska	Dr. A. H. Hoff, U. S. A.
9339	31	Alder	do	Hollow	5	$\frac{7}{16}$	Tlingit (?)	Koluschan	Sitka, Alaska.	Captain Henriques.
10311	45	Wood	Painted and burnt.	Flat	4 $\frac{1}{2}$	$\frac{1}{16}$	.....	.....	Nisise River, Brit. Col.	Lieut. F. W. King, U. S. A.
11389	44	do	Painted.	Slightly pointed	5 $\frac{3}{16}$	$\frac{1}{16}$	Chilkat.	Koluschan	Sitka, Alaska.	Vincent Collyer.
46487	34	do	do	.....	.....	.....	.....	.....	.....	Con. L. A. Beardslee, U. S. N.
45974	58	do	do	Hollow	5	$\frac{1}{16}$	.....	.....	Sitka, Alaska.	John J. McLean.
60223	47	Cedar and spruce.	do	Ovate	5 $\frac{5}{16}$	$\frac{1}{16}$	.....	.....	Alaska	Do.
67899	69	Wood	do	Slightly pointed	4 $\frac{1}{16}$	$\frac{1}{16}$	Chilkat.	Koluschan	do	Do.
74258	55	Cedar	do	Flat	5	$\frac{1}{16}$	.....	.....	do	Do.
75422	33	Spruce.	Painted and inlaid.	Nipple-shaped	5 $\frac{1}{16}$	$\frac{1}{16}$	.....	.....	Sitka, Alaska.	Do.
75423	68	Wood	Painted.	Flat, inset	4 $\frac{3}{16}$	$\frac{5}{16}$	.....	.....	do	Do.
67909 ^a	57	Bone	Engraved.	Flat	4 $\frac{1}{16}$	$\frac{1}{16}$	Chilkat.	Koluschan	Alaska	Do.
67909 ^b	39	do	do	do	4 $\frac{1}{16}$	$\frac{1}{16}$	do	do	do	Do.
75421	42	do	do	do	4 $\frac{3}{16}$	$\frac{1}{16}$	.....	.....	do	Do.
18908	66	Cedar	Painted.	Ovate.	5 $\frac{1}{16}$	$\frac{1}{16}$	.....	.....	Sitka, Alaska.	J. G. Swan.
18936	30	do	do	Flat	5	$\frac{1}{16}$	.....	.....	do	Do.
20789	34	Swamp or spotted beech or hazel.	Painted and inlaid.	Nipple-shaped	4 $\frac{1}{16}$	$\frac{1}{16}$	.....	.....	do	Do.
20790	51	Wood	Painted.	Flat	4 $\frac{1}{16}$	$\frac{5}{16}$	.....	.....	do	Do.
89074	46	do	do	.....	5 $\frac{1}{16}$	$\frac{1}{16}$	.....	.....	Queen Charlotte Islands, Brit. Col.	Do.
89180	50	Maple	do	.....	5	$\frac{1}{16}$	.....	.....	Skidgate, Brit. Col.	Do.
20646	64	Redwood cedar	do	.....	5 $\frac{1}{16}$	$\frac{1}{16}$	Bellabella	.....	British Columbia	Do.
20647	56	Maple	Painted and inlaid.	Flat	5 $\frac{1}{16}$	$\frac{1}{16}$	.....	.....	Fort Simpson, Brit. Col.	Do.
88804	53	Curly maple	do	.....	5 $\frac{1}{16}$	$\frac{1}{16}$	.....	.....	Queen Charlotte Islands, Brit. Col.	Do.
73552	32	Birch	Carved	Flat	4 $\frac{1}{16}$	$\frac{1}{16}$	Haida	.....	Haida Mission, Jackson, Alaska.	J. Loomis Gould.
6556	27	Wood	do	Hollow	4 $\frac{1}{2}$	$\frac{1}{16}$	Tlingit (?)	Koluschan	Sitka, Alaska.	T. T. Minor.

1 Parts of three sets.

Indian gambling-sticks in Museum of Archaeology and Paleontology, University of Pennsylvania.

Mu- seum No.	Num- ber of sticks.	Material.	Design.	Ends.	Length.	Diam- eter.	Tribe.	Linguistic stock.	Place collected.	Collector.
15332	40	Alder	Painted	Hollow	Inches. 4 $\frac{1}{8}$	Inch. $\frac{6}{16}$			Northern Alaska	Lieut. Miles C. Gorgas, U.S.N.
15491	44	Maple	do	Flat	4 $\frac{1}{8}$	$\frac{6}{16}$				
15492	47	Alder	do	Hollow, and inset with shell.	5 $\frac{1}{8}$	$\frac{6}{16}$				
18372	63	Birch or larch	do	Flat	5 $\frac{3}{16}$	$\frac{6}{16}$				

Indian gambling-sticks in Field Columbian Museum, Chicago.

18349	55	Wood	Painted	Rounded	4 $\frac{3}{8}$		Bellacoola	Salishan	British Columbia	Dr. Franz Boas.
18348	24	do	3 carved; 21 painted.		4 $\frac{1}{2}$		do	do	do	
18350	42	do	Painted.	Rounded	4 $\frac{3}{8}$		do	do	do	
19017	65	do	do	do	4 $\frac{3}{8}$		Kwakwakiutl	Wakashan	do	
14396	61	do	do	Flat	4 $\frac{3}{8}$					Do.
14395	57	do	Painted; 5 in- laid.	do	5					
14397	43	do	Painted		4 $\frac{3}{8}$					

Indian gambling-sticks in American Museum of Natural History.

E 558	57	Maple	Painted		4 $\frac{1}{8}$		Taku	Koluschan	Alaska	Lieut. George T. Emmons.
E 596	43	do	do	Nipple-shaped	5 $\frac{1}{8}$	$\frac{5}{16}$	Tlingit	do	Fort Wrangel	Do.
E 599	46	do	do	Flat	5 $\frac{1}{8}$	$\frac{5}{16}$	do	do	Sitka, Alaska	Do.
E 600	66	do	do		4 $\frac{1}{8}$		Taku	do	Alaska	Do.
E 601	62	do	do	Ovate	4 $\frac{1}{8}$	$\frac{4}{16}$	Tlingit	do	Sitka, Alaska	Do.
E 602	67	do	do	do	4 $\frac{1}{8}$	$\frac{5}{16}$	do	do	do	Do.
E 603	43	Wood	do		4 $\frac{1}{8}$	$\frac{4}{16}$		do		Do.

Indian gambling-sticks in Peabody Museum of American Archaeology.

E 1019	16	Maple	do	Ovate	$4\frac{3}{16}$	$\frac{5}{16}$	Chilkat	do	Do.
19 1058	53	Wood	Painted and carved.	Flat	$4\frac{1}{16}$	$\frac{5}{16}$	Stahkin	do	Do.
E 2274	49	do	Painted	do	$3\frac{3}{16}$	$\frac{5}{16}$	Tlingit	Fort Wrangel	Do
16 682	60	Maple	do		$5\frac{1}{16}$	$\frac{7}{16}$	Haida	Skittagetan	Dr J. W Powell.
16 683	88	Wood	do		5	$\frac{5}{16}$	do	do	Do
744 16	54	do	do	Flat	$4\frac{1}{16}$	$\frac{5}{16}$	Bellabella	Wakashan	Do.
744	72	do	Painted and burut totem- ic designs.	Hollowed	$5\frac{1}{16}$	$\frac{6}{16}$	do	do	Do.
16 785	61	do	Painted and inlaid.	Nipple-shaped	$5\frac{3}{16}$	$\frac{6}{16}$	Tsimshian	Chinmesyan	Dr. Franz Bons.
16 914	16	Willow	Painted	Flat	$4\frac{6}{16}$	$\frac{3}{16}$	Nslakya pa- muk (Thomp- son River In- dians).	Salishan	James Teit.

203	42	Wood	Painted	Flat	$4\frac{1}{16}$	$\frac{6}{16}$	do	Northwest Coast	
203a	37	do	do	do	$4\frac{1}{16}$	$\frac{5}{16}$	do	do	
203b	17	do	do	Nipple-shaped	$4\frac{1}{16}$	$\frac{5}{16}$	do	do	
1717	53	do	do	Slightly rounded	$4\frac{1}{16}$	$\frac{5}{16}$	Kolusehan (?)	Sitka, Alaska	E. G. East.
1718	43	do	12 inlaid with halibutis.	Rounded	$4\frac{1}{16}$	$\frac{5}{16}$	do	do	Do.
48395	51	do	Painted	do	$5\frac{1}{16}$	$\frac{4}{16}$	do	do	

The carved gambling-sticks furnish a suggestion as to the probable origin of the seal-cylinder such as was used in ancient Babylonia. Cylindrical stamps of unglazed pottery, pierced with a hole like the seal-cylinder of Asia, are found in various parts of America. Such a stamp from Ecuador, bearing a highly conventionalized device of a bird (Plate 41, fig. 3), might readily have been derived from a carved arrow-shaftment, and it is reasonable to believe that the Babylonian seal, often bearing devices of animals, and the carved gambling-stick, the emblem and symbol of a man, should have had a similar origin.¹

The set of American Indian gambling-sticks may be regarded as the antitype of the pack of playing-cards, to which, as will appear from the Korean *htou-tjyen* (No. 77), they directly lead.

77. HTOU-TJYEN. Playing-Cards.² Korea.

(a) Pack of eighty cards.

(b) Reproduction of native pictures; gamblers playing *Htou-tjyen*.³ (Plate 44.)

The cards consist of strips of oiled paper 8 inches long by $\frac{1}{4}$ inch wide. The backs are uniformly marked with the scroll as represented on fig. 218. The cards are divided into eight suits as follows (fig. 219):

Sa-rām (Chinese, *yan*), "man."

Moul-ko-ki (Chinese, *ü*), "fish."

Ka-ma-koui (Chinese, *ü*), "crow."

Kkoueng (Chinese, *chí*), "pheasant."

No-ro (Chinese, *chéung*), "antelope."

Pyel (Chinese, *sing*), "star."

Htok-ki (Chinese, *t'ó*), "rabbit."

Māl (Chinese, *má*), "horse."⁴

The cards of each suit are distinguished by numerals from 1 to 9 (fig. 220), the tenth card being designated as *tjyang*, "General." (Plate 44.) A variety of games are played with the cards in Korea, the games in general resembling those played with cards in China. At the present day a pack usually consists of forty to sixty cards of four or six suits instead of eight, and the suit marks are not represented upon the numeral-cards, as cards of all suits have precisely the same value in the commonest game.

¹ Korean Games, p. xxxii. It is gratifying to the writer that his theory of the origin of the seal-cylinder should have received such ready acceptance and confirmation by his colleague, Prof. Herman V. Hilprecht, of the University of Pennsylvania. In his *Old Babylonian Inscriptions* (I, Pt. 2, Philadelphia, 1896, p. 36), he writes: "It becomes now very evident that the Babylonian seal-cylinder, with its peculiar shape and use, has developed out of the hollow shaft of an arrow marked with symbols and figures, and is but a continuation and elaboration in a more artistic form of an ancient primitive idea."

² Cat. No. 77047, U.S.N.M. Collected by Lieut. J. B. Bernadou, U. S. N.

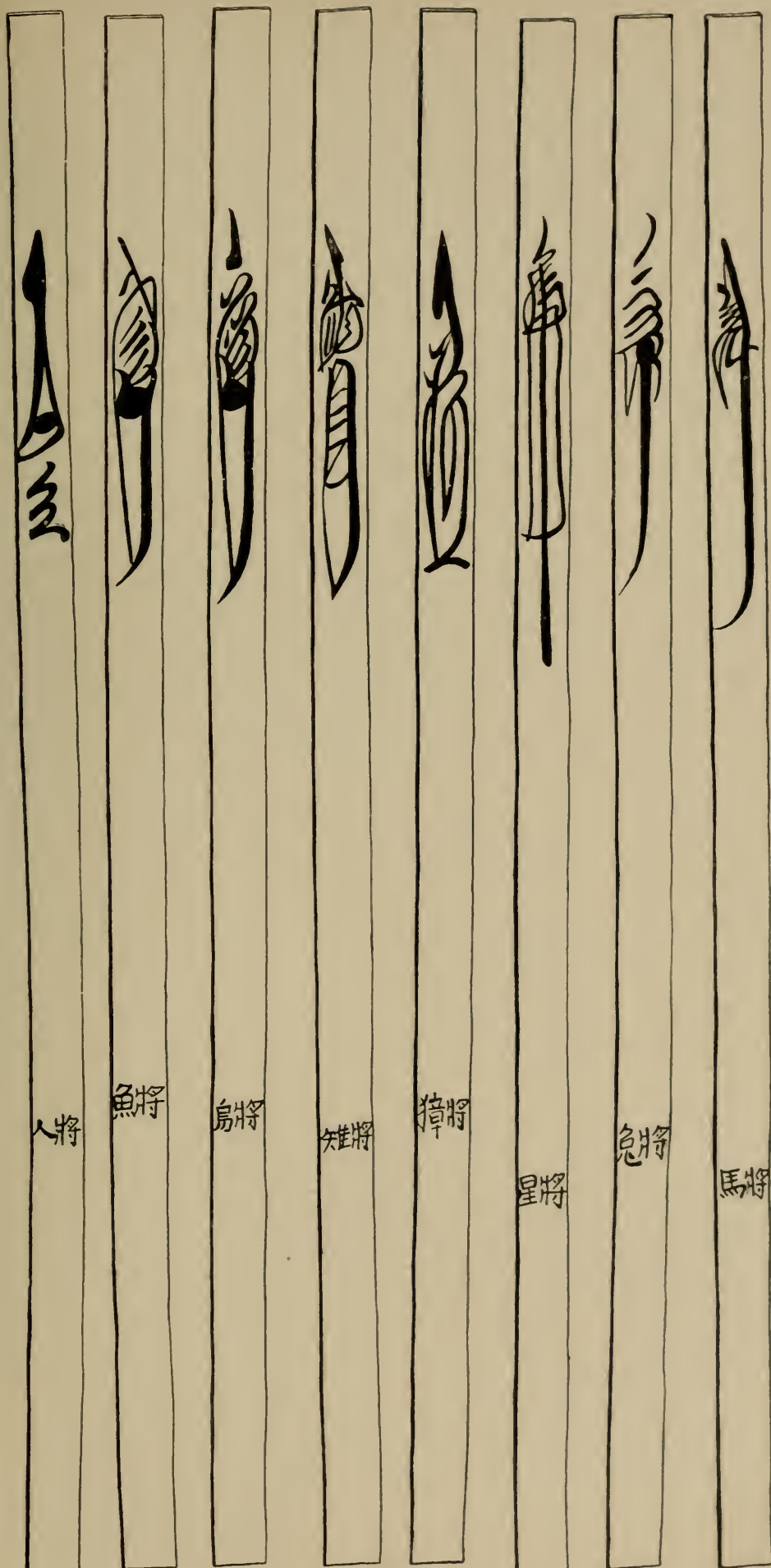
³ From Korean Games.

⁴ These suit marks may be regarded as the symbols of the Eight Directions, and agree somewhat closely, though evidently earlier, with the Eight Creatures: Horse, Ox, Dragon, Fowl, Swine, Pheasant, Dog, Goat, associated with the Eight Diagrams.



KOREAN CARD PLAYING.

From painting by native artist, reproduced in Korean Games.



THE EIGHT "GENERAL" CARDS.

Korea.

Cat. No. 77047, U.S.N.M. From Korean Games.

The origin and significance of Korean playing-cards are revealed both by their designs and by their name. The latter, *htou-tjyen*, is the Chinese *tau tsín*, meaning "fighting tablets," *tsín* being a narrow slip intended to write on. Examining the reverse of the cards (fig. 218) the device is seen to represent the feather of an arrow. Comparison of the eighty cards with the eighty arrow-derived lots shows their practical identity, and we may conclude that the cards are highly conventionalized shaftments of arrows, retaining in their suit marks the same symbolism as that of the quiver of arrows from which they were derived. The Japanese *mikuji*, or "temple-lots" (No. 68), no doubt illustrate, both in form and material, an earlier stage of the present paper cards. Mr. Wilkinson informed me that the Koreans say that the "tens" or "General" cards once bore pictures, more or less carefully drawn, of the various emblems portrayed, of which the present scrawls are declared to be corruptions. This would seem to carry back, directly, the cards toward the type represented by the carved gambling-stick (No. 76 b).

Of the Korean games with cards, which are described in detail in "Korean Games," the most common one is similar to the American Indian game of Straw (p. 894). Its name is *Yet-pang-mang-i*.¹

The cards are shuffled, as is customary, by the dealer, who divides the pack into two parts. These he holds at the top in each hand, drawing the ends of the cards, which lay side by side, through each other; or, the cards are drawn out near the bottom and put upon the top.

One pack is used in this game and any number may play. The gamekeeper, *Moul-tjyou*,² deals a card face down to each player, including himself, always drawing the cards from the bottom instead of from the top. The players have all put down their wagers, which have been covered by corresponding amounts by the *Moul-tjyou*. The object of the game is to get two or three cards upon which the sum of the



Fig. 218.

REVERSE OF KOREAN
PLAYING-CARD SHOW-
ING ARROW FEATHER.

Length, $7\frac{1}{2}$ inches.

From Korean Games.

¹ *Yet-pang-mang-i* (*yet* is a "sweetmeat," *pang-mang-i* a "pestle" or "club") is the most popular game. Sometimes the same player holds the bank for three rounds, sometimes for five. The game is a favorite with the Korean sharper, who will abstract an extra card or, if dealer, will place a *tjyang* and a *kou* (nine) where they will fall to himself.—WILKINSON.

² Chinese, *mat chü*, "things ruler."

numerals is nine, called *kap-o*, or nineteen, the tens not counting, and only the units being significant. In default of achieving nine, the

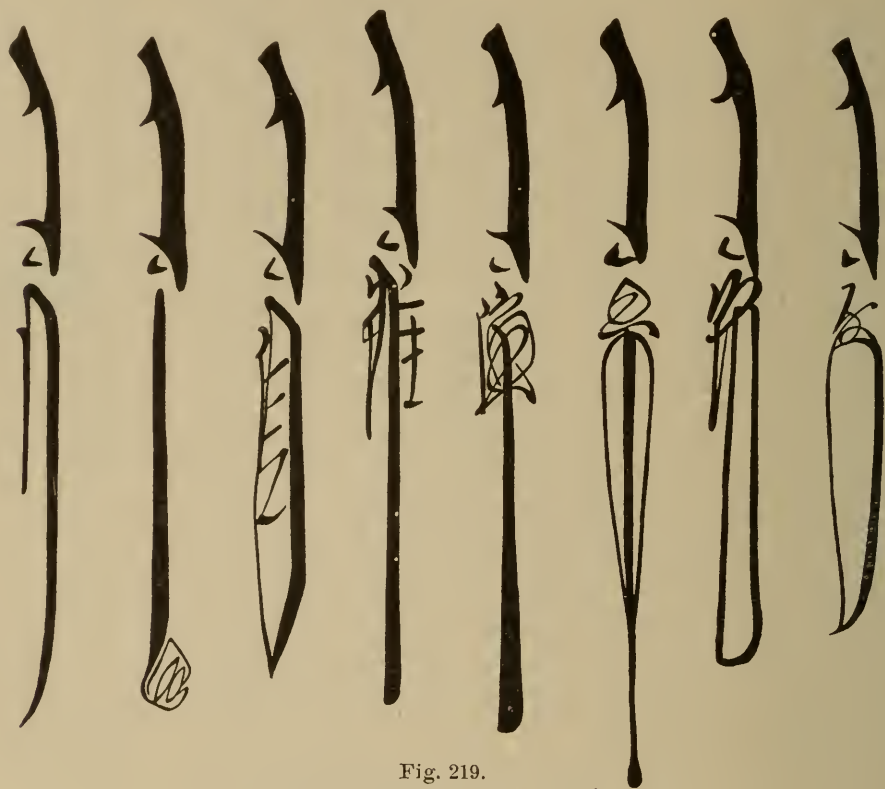


Fig. 219.

SUIT MARKS ON KOREAN CARDS.

From Korean Games.

lower units count, eight being considered good. Each player then draws one or two cards from the bottom of the pack.

If the *Moul-tjyou* has an excess over any player, taking the sum of

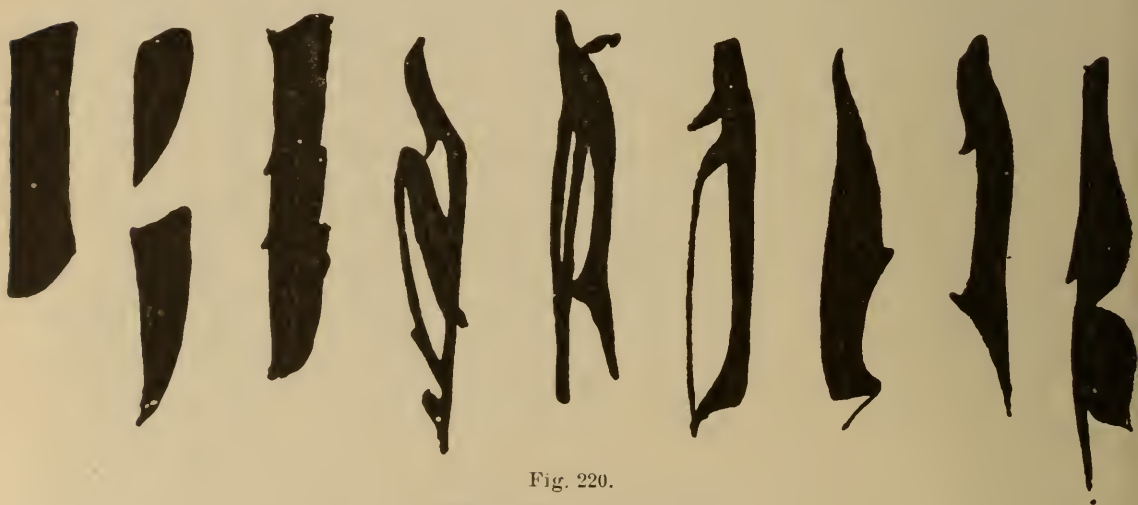
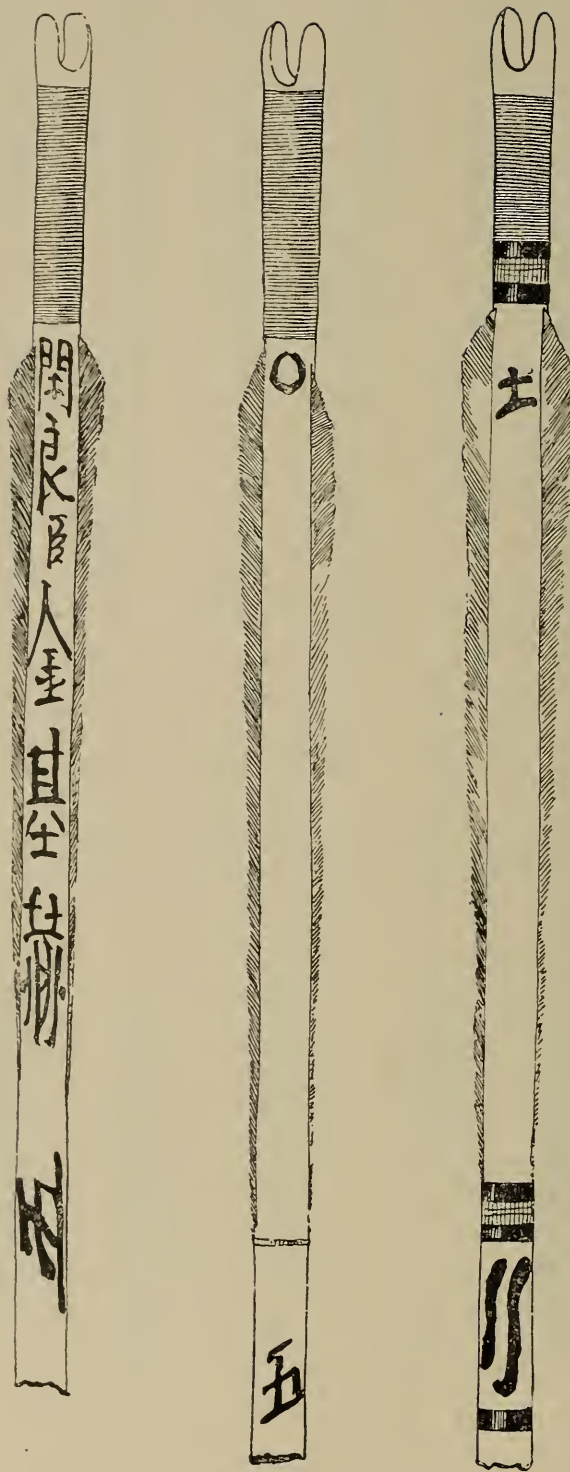


Fig. 220.

NUMERALS ON KOREAN CARDS.

From Korean Games.

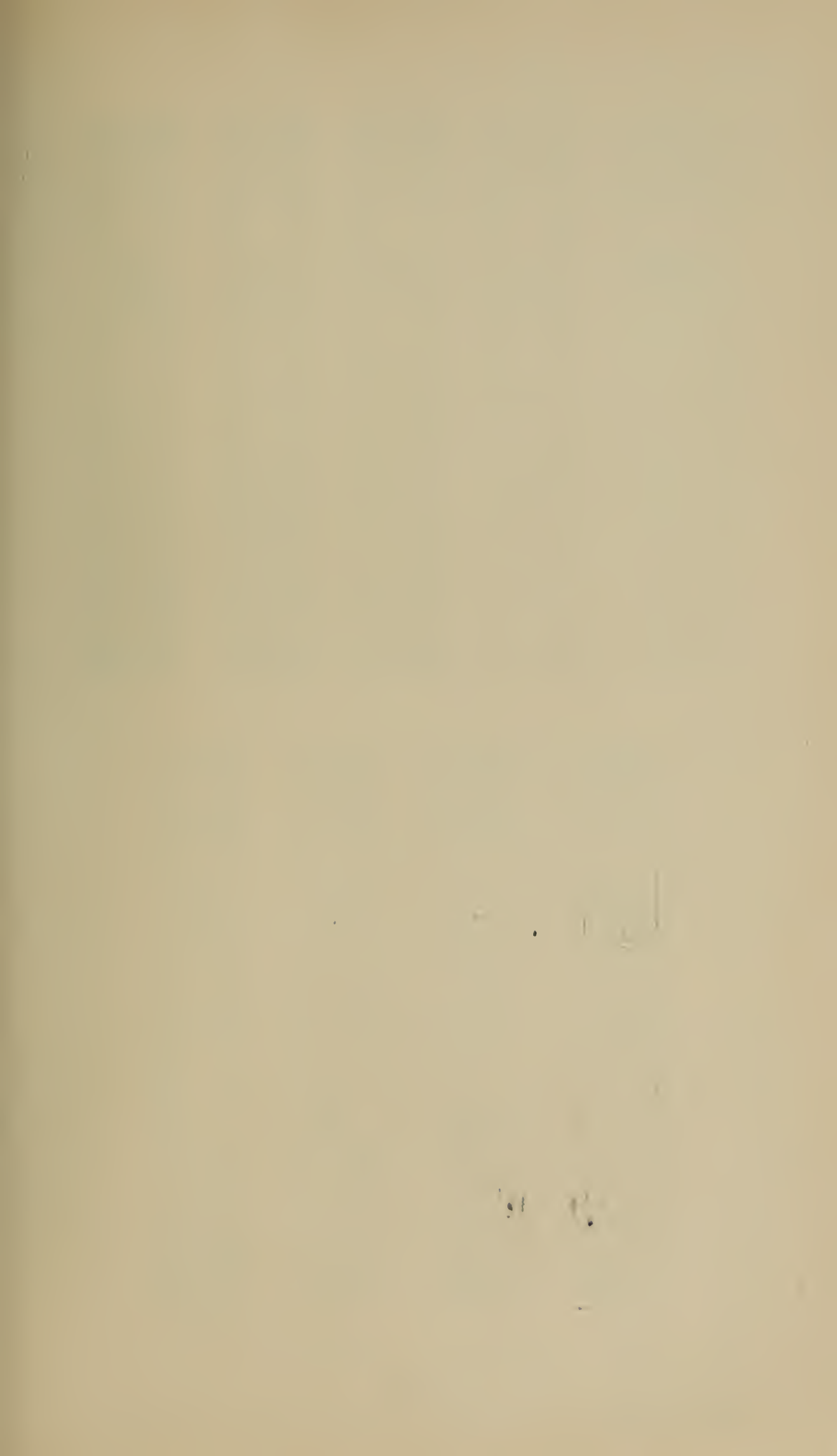
the numerals on his two or three cards, less the tens, he wins that player's stakes; but the players who count higher than the *Moul-tjyou*



SHAFTMENTS OF PRACTICE ARROWS.

Korea.

U. S. National Museum. From Korean Games.





CHINESE PLAYING-CARDS.

Showing survivals of Korean card numerals as index-marks.

Kiu Kiang.

Cat. No. 6, Wilkinson collection, Museum of Archæology, University of Pennsylvania.

each wins an amount equal to their stakes from him. When both count alike, neither wins. Three cards having the same number count higher than nine. It will be observed that in this game the suit-marks do not appear to be regarded, and it is to be inferred that the packs of forty and sixty cards, without suit-marks, are used for it.

78. PRACTICE ARROWS.¹ Korea. Three from a set of five.

The arrows used at the present day in archery (Plate 46). They are called *you-yep-tjyen* (Chinese, *lau íp tsín*), "willow-leaf arrows," and are made of bamboo, 34 inches in length. The point is of iron, nail-shaped, with a stop which fits against the fore-shaft. The latter is usually made of cherry wood, with or without the bark on, and is about $1\frac{1}{4}$ inches in length. The footing, also of cherry wood, has a cylindrical nock with a U-shaped notch. The feathers, three in number, are carefully and uniformly trimmed and are fastened with glue; on some, in a straight line, and on others, at a slight angle to the shaft. These arrows usually bear the personal name of the owner, written in Chinese characters, between the feathers. All of these arrows are numbered with Chinese characters, from one to five below the shaftment.²

These arrows are shown to illustrate the probable source of the Korean playing-cards, which, however, doubtless originated long before the art of writing was perfected. It will be observed that the arrows are numbered in sets of five, while the cards are in suits of tens. In the *tong-kǎi*, or ceremonial quiver (No. 61), there are ten arrows, however, and the feathers on these arrows have black tips, which seem to be perpetuated in the feather-like marks on the backs of the cards.

79. PLAYING-CARDS.³ Kiu Kiang, China.

Nine cards of the suit of *mán*, or "myriads" (Plate 47), from a set consisting of four packets of thirty cards each, and five jokers: the Five Blessings, *Fuk*, *Luk*, *Shau*, *Hí*, *Ts'oi*, "Happiness, Promotion, Long life, Posterity, and Wealth." The four packets are like those of the succeeding cards (No. 80).

It is probable that Chinese playing-cards, of which there are several kinds, take their form from the narrow Korean cards. The cards with money-symbols seem to be in the direct line of descent, if not from cards of which the Korean are survivals, at least from cards of the same character and origin. These particular cards are shown (Plate 47) to illustrate the index-marks on the ends (of common occurrence on the cards of this type), which may be survivals of the numerals on the Korean cards (fig. 220). Mr. Cushing regards these numerals as likely to have been derived from the cut cock-feathers of the original arrows. Mr. Wilkinson, on the other hand, considers them to be modifications of Chinese numerals.

¹ U. S. National Museum.

² Korean Games, p. xxi.

³ Cat. No. 6, Wilkinson collection. Mus. Arch., Univ. Penn.

80. TSÉUNG-KWAN P'ÁI. Playing-Cards.¹ Kwangtung, China.

Set of one hundred and twenty cards, comprising four packs of thirty cards, each containing nine cards, from one to nine, of the suits of *ping*, *sok*, and *kún* ("cakes," "strings," and "myriads"), and three jokers: *Pák fá*, *Hung fá*, and *Lò ts'in* ("White Flower," "Red Flower," and "Old Thousand").



Fig. 221.

HINDU PLAYING-CARD (FISH AVATAR).

Cat. No. 19135, Museum of Archaeology, University of Pennsylvania.

81. HANA-GARUTA. "Flower Cards." Playing-Cards,² Japan.

Forty-eight cards with plain black backs, and faces bearing pictures of flowers in colors. Divided into twelve suits, which correspond with the twelve months and receive the following names:³

1. *Matsu*, Pine.
2. *Ume*, Plum.
3. *Sakura*, Cherry.

¹ Cat. No. 169334, U.S.N.M. Gift of Stewart Culin. These cards were purchased in a Chinese shop in Washington, D. C., and are the kind used by the Chinese laborers in the United States. It may be remarked that they are chiefly sold in this country for use as markers in the game of *Fán t'án*. Card-playing is very uncommon among the immigrants, and seldom if ever practiced except at the season of the New Year.

² Cat. No. 150828, U.S.N.M. Gift of Mrs. J. K. Van Rensselaer.

³ Comprising the favorite flowers of Japan, which have been so arranged, according to their time of blooming, as to form a floral calendar. The list of flowers with their months is given by Dr. J. J. Rein. Japan, Travels and Resources, London, 1884, p. 441.

4. *Fugi*, Wisteria.
5. *Ayame*, Sweet Flag.
6. *Botan*, Peony.
7. *Hagi*, Lespedeza (Bush Clover).
8. *Susuki*, Eularia.
9. *Kiku*, Chrysanthemum.
10. *Momiji*, Maple.
11. *Ame*, Rain.
12. *Kiri*, Paulownia.

The game is played by three persons, one of whom deals seven cards to each player and seven face up on the table. The dealer then plays out a card, with which he endeavors to match one of those on the table. If



Fig. 222.

HINDU PLAYING-CARD (TORTOISE AVATAR).

Cat. No. 19135, Museum of Archaeology, University of Pennsylvania.

successful, he takes up both cards and lays them aside. The points are counted, according to certain combinations of two or more cards, which a player may make either with the cards originally dealt him or with three taken up. These combinations are called *yaku* or "prizes." They are reckoned as equivalent to one or more *kwan* of twelve points. The counts are extremely numerous and complicated, and there are several varieties of the game. For a detailed account consult "Korean Games."

¹ Bibliography: C. M. Belshaw, *Hana Fuda*, the Japanese Flower Game, more commonly known by the Japanese as *Hachi-ju-hachi*, or Eighty-eight, 9 pp., 8vo., Yokohama, 1892.

R. Lehmann, *Gesellschaftsspiele der Japaner*. Pt. 1: *Uta garuta*, a card game (all

The name applied to cards, *caruta*, is certainly the Spanish *carta*, but the cards appear to be distinctly Japanese, and to contain a suggestion of the primitive modes of thought under which they doubtless originated.

82. GANJIFA. Playing-Cards.¹ Lucknow, India.

Set of ninety-six circular cards. Thin disks of lacquered card, 1½ inches in diameter. Backs plain red. Faces bear suit marks on



Fig. 223.

HINDU PLAYING-CARD (*Paraçu-Râmd*).

Cat. No. 19135, Museum of Archaeology, University of Pennsylvania.

grounds of different colors. There are eight suits (*rang*, "colors"), of twelve cards each, consisting of ten numerals and two court cards,

published), Mittheilungen d. deutschen Gesellschaft f. Natur- und Völkerkunde Ostasiens, III, Pt. 30, pp. 422-425, 4to., Yokohama, 1883.

H. Spencer Palmer, Hana-awase, with colored facsimiles of playing-cards on four plates (Transactions Asiatic Society of Japan, XIX (Pt. 3), pp. 545-564), 8vo., Yokohama, 1891.

Mrs. J. King Van Rensselaer, Playing-Cards from Japan, with plates, 3 pp. (Proceedings U. S. Nat. Mus., 1891, 8vo., Washington).

The writer is indebted for the above list to Fr. Von Wenckstern's Bibliography of the Japanese Empire, Leiden, 1895.

¹ Cat. No. 15280, Mus. Arch., Univ. Penn.

Mr. Ramachandrayya informs me that the chief place of manufacture of playing-cards in India is Kondapalle, in the Presidency of Madras.

Wazir and *Shah*. The suits, which are divided into "superior" and "inferior," *beshbur* and *kumbur*, are as follows:

SUPERIOR.

Taj, "crown."
Sooféd, "white."
Shumsher, "saber."
Gholam, "slave."

INFERIOR.

Chung, "harp."
Soorkh, "red."
Burat, "diploma."
Quimash, "merchandise."

The colors of the grounds in the same order are yellow, black, red, yellow, green, red, brown. Four additional packs of these cards in the University Museum agree with the above in number and design, varying



Fig. 224.

HINDU PLAYING CARD (*Pāraqu-Rāmd*).

Cat. No. 19135, Museum of Archeology, University of Pennsylvania.

only in diameter from $1\frac{5}{16}$ to $1\frac{1}{16}$ inches, and in fineness of execution. One pack (Cat. No. 19134), apparently more ancient, is distinguished by superior finish, both in painting and lacquer. While the colors of the grounds of all these cards, with reference to the suit-marks, are practically the same, they differ in this respect from the similar pack in the Museum of the Royal Asiatic Society described by Chatto,¹ who gives a description of the game, taken from the Calcutta Magazine for 1815.

The preceding cards may be regarded Persian or Mohammedan in

¹ Facts and Speculations on the Origin and History of Playing-Cards, London, 1868, p. 35.

type. Such is not the case with the following packs in the University Museum, which bear Hindu emblems representing the ten avatars of Vishnu, from which they are known as the *dasavatara mulu*, or the Game of the Ten Incarnations.

One pack (Cat. No. 19135) consists of one hundred and twenty lacquered disks of cardboard, $4\frac{1}{2}$ inches in diameter, with plain red backs, and faces painted with suit-marks on grounds of different colors. There are ten suits of twelve cards each, consisting of ten numerals and two court-cards. The court-cards bear representations of the ten avatars of Vishnu, one of the two of each suit having a single figure, and the other the same figure in a kind of temple, with two attendants (figs. 221-224). The marks of the numerals are as follows:

1. *Matsyá*, the fish. Fish, black.
2. *Kurma*, the tortoise. Tortoise, brown.
3. *Varah*, the boar. Conch, dark green.
4. *Nara-Simha*, the man-lion. Flower,¹ blue.
5. *Vamana*, the dwarf. *Lota*,² blue.
6. *Páragu-Rámá*. Axe, white.
7. *Rámá-Chandra*. Arrow, red.
8. *Krishna*. Pestle, green.
9. *Buddha*. Lotus flower, yellow.
10. *Kalkiná*, the "white horse." Sword, red.

Another pack (Cat. No. 19156) in the same museum, $3\frac{1}{8}$ inches in diameter, corresponds in number, the emblems also referring to the ten avatars. The colors and suit marks vary somewhat in order from the preceding.

1. *Matsyá*. Fish, red.
2. *Kurma*. Tortoise, red.
3. *Varah*. Boar, yellow.
4. *Nara-Simha*. Lion, green.
5. *Vamana*. *Lota*, green.
6. *Páragu-Rámá*. Ax, brown.
7. *Rámá-Chandra*. Bow and arrow, yellow.
8. *Krishna*. Disk,³ brown.
9. *Buddha*. Conch, black.
10. *Kalkiná*. Sword, black.

Another pack (Cat. No. 16585*f*), 3 inches in diameter, incomplete, agrees with the preceding.

Another pack (Cat. No. 16585*b*), 3 inches in diameter, also incomplete, apparently has eight suits, of which the first, third, fifth, sixth, eighth, and ninth agree with the preceding. In addition there is a green suit on which the marks are small yellow rectangles bearing the legend *sríga*.

¹ My informant, Mr. P. Ramachandrayya, of Guntur, India, was unable to identify this emblem. It resembles a flower, but may be a mace.

² Water vessel.

³ My informant was unable to identify this emblem, a yellowish disk with a red dot in the center.

Another pack (Cat. No. 16585*c*), $3\frac{3}{8}$ inches in diameter, incomplete, has six suits: first, third, fifth, seventh, eighth, and ninth, agreeing with Cat. No. 19156.

Two other packs (Cat. No. 16585*a*), $2\frac{3}{4}$ inches, and (Cat. No. 16585*d*), $3\frac{3}{8}$ inches in diameter, both incomplete, each has four suits with the following marks:

- Ax, red.
- Trident, yellow.
- Rectangle,¹ green.
- Mace, black.

The court cards are missing.

From the comparison of these packs it would appear that as in the *Ganjifa* variations occur in the colors associated with certain suit marks,



Fig. 225.

HINDU PLAYING-CARD (*Buddha*).

Cat. No. 19735, Museum of Archaeology, University of Pennsylvania.

and, also, as in the case of the Korean cards *Htou-tjyen* (No. 77), that there has been a progressive diminution of the suits; in this case from ten to four. Changes and substitutions are also seen to have occurred in the suit marks.

The opinion was expressed by Mr. Ramachandrayya that the Hindu cards, not being mentioned in the early records, were probably imitated

¹ In one pack (Cat. No. 16585*a*), this inscribed *sri*.

from those of Europe. The writer believes that it is more likely that their origin rests directly upon older Asiatic traditions.¹

S3. GANJĪFEH. Playing-Cards.² Persia.

Fifty-seven cards of a set of sixty. Card-pieces about $2\frac{1}{2}$ by $1\frac{3}{4}$ inches, consisting of thick lacquered cardboard with black backs. The faces bear pictures painted in colors upon gold-foil, the grounds being of five different colors. These are as follows:

Black: Lion devouring serpent; lion devouring ox; lions and serpent.
Three varieties.

Green: Youth (King) seated. Three varieties.

Yellow: Woman (Queen). Five varieties, in four of which the woman is accompanied by a child.

Gold: Youth; hunter. Three varieties.

Red: Dancing-girls. Three varieties.

A pack of Persian playing-cards in the possession of Mrs. C. C. Curtis, of Albion, New York, are identical with the preceding in size and material, but bear somewhat different designs. They number twenty cards, of five different colors, black, yellow (white), red, gold, and green, four of each. There are two cards of each kind, making ten different cards.

Black: Two lions devouring two serpents; lion devouring antelope (Plate 48*a*, *b*.)

Yellow: King on throne; mother (Madonna?) with child. (Plate 48*c*, *d*.)

Red: Lady with child; girl with wineglass and bottle. (Plate 49*a*, *b*.)

Gold: Two soldiers; lad with dog. (Plate 49*c*, *d*.)

Green: Dancing-girls; queen on throne. (Plate 50*a*, *b*.)

The first-mentioned cards of each pair agree with those described below by General Schindler. It will be observed that the uniform of the soldiers, that of the English East India Company, precludes the possibility of any high antiquity for these particular cards.³

Gen. A. Houtum Schindler, of Teheran, in reply to a letter of inquiry addressed by the writer, has forwarded the following account of Persian cards:

The old Persian name for these cards was *ganjifeh*—a word, I think, derived from the Chinese (*chi-p'ái*—literally, paper-cards, the modern Chinese for playing-cards), with the Persian word *ganj* = "treasure" prefixed. It may have also been originally *Kan-chu-p'ái* = cards from Kanchu, in the Kansu province. The word *ganjifeh* is in Persian now only employed for European playing-cards (four suits, ace to ten; three picture cards each suit), which, however, are also called *varak*, while the old Persian playing-cards are known as *varak i âs*—*varak i âsanâs*—or simply *âs*, from the game *âs* or *âsanâs*, which is played with them. From travelers in Persia in the sev-

¹ As an analogue to the rectangular, arrow-derived cards of Eastern Asia may be found in the playing-sticks of the northwest coast of America, so the wooden gambling-disks of the same Indians may be taken as possible American equivalents of the circular cards of India.

² Cat. No. 18258, Mus. Arch., Univ. Penn.

³ Six Persian cards similar to those described are figured by Mrs. J. K. Van Rensselaer, in *The Devil's Picture Books*, London, 1892.



a



b



c



d

PLAYING-CARDS (*ganjifeh*).

Length, $2\frac{1}{2}$ inches; width, $1\frac{1}{4}$ inches.

Persia.

In the possession of Mrs. C. C. Curtis, Albion, New York.



a



b



c



d

PLAYING-CARDS (*ganjifeh*).
Persia.

In the possession of Mrs. C. C. Curtis, Albion, New York.



a



b

PLAYING-CARDS (*ganjifeh*).

Persia.

In the possession of Mrs. C. C. Curtis, Albion, New York.

enteenth century we know that a set of *ganjifeh* consisted of ninety or ninety-six cards in eight suits or colors. At present a set consists of twenty cards in five colors or values. These values are:

1. *Shîr va Khurshîd* or *âs*: Lion and Sun, or Ace.
2. *Shâh* or *Pâdishâ*: King.
3. *Bibî*: Lady (or Queen).
4. *Sarbâz*: Soldier (or Knave).
5. *Lakat* (meaning something of little value): generally a dancing-girl.

The backs of the cards are always black or of a dark color, but their faces have grounds of different colors, viz: The Lion and Sun, a black ground; the King, a white ground; the Lady, red; the soldier, gold; the *Lakat*, green. The pictures on the cards show much variety and are often obscene, particularly those on the card of the lowest value. The ordinary types as now made are: Ace, a Lion and Sun, as in the Persian arms; a King sitting on a throne; a European lady in a quaint costume; a Persian soldier shouldering his rifle; a Persian dancing-girl. The word *ganjifeh* I have explained. *Âs* is no doubt our word "ace," probably introduced into India through the Portuguese. Neither of the words is found in Persian dictionaries. The game of *Âs* is exactly like Poker, but without any flushes or sequences. There are four players, and each player gets five cards, dealt to the right. The dealer puts down a stake. The first player then looks at his cards. If he "goes," he says *dîdam* (I have seen), and covers the stake or raises it. If he does not wish to play, he says *nadîdam* (I have not seen) and throws his cards. He may also "go" without looking at his cards—that is, in poker parlance, "straddle"—and he says *nadîd dîdam* (not seeing, I have seen). The second player, if he wishes to play, must cover the stakes, and can also raise. The third player and the dealer then act in the same way just as in poker, and when the stakes of all players are equal and no one raises any more the cards are turned up and the player holding the best hand wins the stakes.

The hands in the order of their value are as follows:

Seh va just, i. e., three and a pair; a "full."

Sehta, i. e., threes, aces, kings, etc.

Do just, i. e., two pairs; aces highest.

Just, i. e., one pair; aces highest.

When two players have the same pair or pairs, the other cards decide; for instance, a pair of kings, ace, soldier, and *lakat*.

"Bluffing" is a feature of the game and is called *tûp zadan*; literally, "fire off a gun." A bluff is *tûp*.

84. PLAYING-CARDS.¹ Siam. Nineteenth century.

Pack of eighty cards, painted in colors on black cardboard, $1\frac{1}{2}$ by $2\frac{1}{2}$ inches. One suit of ten cards eight times repeated, comprising numeral-cards with conventional flowers as suit-marks; from two to eight cards with pictures of fish; eight cards with picture of man in native dress, and eight with grotesque picture of man with sword.

85. TAROCCHI. Playing-Cards² (Venetian Tarots). Milan, Italy. Nineteenth century.

Seventy-eight cards, comprising twenty-two *attuti* and fifty-six numerals. The suit-marks of the numeral series are *Coppe*, *Danari*, *Spade*, and *Bastoni*; "Cups," "Money," "Swords," and "Clubs." The court-

¹Cat. No. 16528, Mus. Arch., Univ. Penn.

²Cat. No. 15645, Mus. Arch., Univ. Penn.

cards are designated as *Re*, *Regina*, *Carallo*, and *Fante*. The *attuti* are numbered and bear the following names:

I. Il Bagattella.	IX. L' Eremita.	XVII. Le Stelle.
II. La Papessa.	X. Rout. Dellafor.	XVIII. La Luna.
III. L' Imperatrice.	XI. La Forza.	XIX. Il Sole.
IV. L' Imperatore.	XII. L' Appeso.	XX. Il Gindizio.
V. Il Papa.	XIII.	XXI. Il Mondo
VI. Gli Amanti.	XIV. La Temperan.	Il Matto
VII. Il Carro.	XV. Il Diavolo.	
VIII. La Giustizia.	XVI. La Torre.	

The thirteenth card with the picture of "death" bears no name,¹ and the *matto* is not numbered.

The origin of European playing-cards is extremely obscure. They are variously regarded as having been invented in Europe, and to have been introduced from the East. Willshire² favors the former view, and assigns the earliest European cards to Italy, while others believe them to have been derived from China, or to have been introduced by the Arabs or Gypsies.³

There are two principal kinds of European cards; one consisting of from thirty-two to fifty-six cards, comprised in four suits, each composed of a series of numeral cards and court or coate-cards, or honours; and another, called *Tarots* (France) or *Tarocchi* (Italy), in which the preceding pack is supplemented with twenty-two or more cards called *atouts* (France) or *atutti* (Italy), bearing emblematic devices of a mythological or historic character. The earliest, or what are believed to be the earliest, Italian cards are of the latter kind.

There are three varieties of Italian *Tarots*, according to Willshire: the *Tarots* of Venice or Lombardy, regarded by him as the parent game; the *Minchiate* of Florence, and the *Tarocchino* of Bologna.

The source of the allegorical designs on the cards of the emblematic sequence has been referred to a series of early Italian prints bearing full-length figures illustrating the various conditions of life—the Muses, Arts, Sciences, etc.—which are regarded as having been intended for purposes of instruction rather than for play. These prints, known as the *Tarocchi di Mantegna* or the *Carte di Baldini*, exist in several European collections, and are fifty in number, arranged in five series, consecutively numbered (No. 86). Mr. W. H. Wilkinson, in a paper on the Chinese Origin of Playing-Cards,⁴ in which he presents a strong

¹In a similar pack from Piacenza (Gius Beghi), the thirteenth card is labeled *Lo Specchio*.

²A Descriptive Catalogue of Playing and Other Cards in the British Museum, 1876.

³For a discussion of the relations of European and Oriental playing-cards see: Karl Himly, *Morgenländisch oder abendländisch? Forschungen nach gewissen Spielausdrücken*, Zeitschrift d. deutschen morgenländischen Gesellschaft, XLIII, pp. 415, 555. For a list of books on playing-cards, consult A Bibliography of Card-Games and of the History of Playing-Cards, compiled by Norton T. Horr, Cleveland, Ohio, 1892.

⁴American Anthropologist, January, 1895.

argument in favor of the Chinese origin of European cards, regards the Italian *Tarot* pack as a suggestive compound of the two national card games of China; *Kon ú*, played with *Kwan p'ai* (No. 80), and *T'in kau*, played with dominoes (No. 21), or domino-cards (No. 22). In the light thrown by the study of Korean cards upon the origin of playing-cards in Asia, the present writer believes that while it is more than probable European playing-cards had an identical origin with those of China, it is not yet apparent that there was any actual transference of cards or card-games. In his opinion it may be concluded that the four suits of European cards were originally the emblems of the Four Directions.

86. TAROCCHI DI MANTEGNA. *Misero* (I); *Marte* (Mars) (XLV). Reproductions¹ of originals in the British Museum. From Willshire.

The first is regarded by some as the source of the design on the *Matto* or *Fou* of the *Tarot* series, and the second that of *Il Carro* (VII). The resemblance between the emblems testifies either to a descent of both compositions from an antecedent or common type, or that the piece No. 7 of the old Venetian *Tarots* is simply a modification of No. 45 of the Italian sequence (Willshire).

87. MINCHIATE. Playing-Cards.² Florence, Italy. Nineteenth century.

Pack of ninety-seven cards, comprising fifty-six numeral-cards and forty-one *atutti*. The former are similar to those of the preceding pack (No. 85). The *atutti* from I to XXV are numbered.

Willshire describes the characteristics of the Florentine *Minchiate* as follows:

In place of the twenty-two *atutti* of the old Venetian sequence there are forty-one *tarots* proper, i. e., nineteen of the older series, or what are equivalent to them, and twenty-two additional *tarots*, including the *Matto* or *Fou*. The chief modifications of the old Venetian sequence are: the figure of *Le Pape* (No. V) is withdrawn; *La Papesse* (No. II) becomes *Le Grand Duc*; *L'Impératrice* (No. III) and *L'Empereur* (No. IV) represent the "Emperor of the West" and the "Emperor of the East" respectively; *L'Hermite* (No. IX) becomes an old man upon crutches (*Le Sablier* No. XI), having behind him a star and above his shoulders an hourglass transfixd by an arrow; while *La Maison Dieu ou la Foudre* (No. XVI) is discarded, or is perhaps metamorphosed into *L'Enfer* (No. XV), *L'Etoile* (No. XVII), *La Lune* (No. XVIII), *Le Soleil* (No. XIX), and *Le Monde* (No. XXI) are retained. To this slight modification of the old Venetian *Tarots* are added the three theological virtues, Faith (No. XVIII), Hope (No. XVI), and Charity (No. XIX). Other additional pieces are: One of the four cardinal virtues, Prudence (No. XVII); the four elements of the ancient philosophers, as Fire (No. XX), Water (No. XXI), Earth (No. XXII), Air (No. XXIII); the twelve signs of the Zodiac (Nos. XXIV to XXXV); the remainder of the series concluding with the Star, the Moon, the Sun, the World, and *La Renommée*.

Willshire states that there is a tradition that *Minchiate* was invented by Michael Angelo to teach children arithmetic.

¹ Lent by Stewart Culin.

² Cat. No. 15641, Mus. Arch., Univ. Penn.

88. TAROCCHINO. Playing-Cards.¹ Bologna,² Italy. Nineteenth century.

Pack of sixty-six cards, comprising forty numeral-cards and twenty-two *atutti*. The numeral-cards are like those of the preceding packs, except that they are double-headed, instead of having full-length figures, and in that the twos, threes, fours, and fives are suppressed, the latter being the chief characteristic of the *Tarocchino*. The *atutti* bear designs copied from a Florentine *Minchiate* set.

According to Willshire, this modification of the *Tarot* game was invented at Bologna, early in the fifteenth century, by Francesco Fibbia (Prince of Pisa), an exile in that city, dying there in 1419. The word *tarocchino* is a diminutive of *tarocchi*, a name early applied to any game with *Tarots*.

89. TAROTS. Playing-Cards.³ French.⁴ Claude Burdel, 1751.

Pack of combined *Tarots*; that is, twenty-two *atouts* and fifty-six numerals. The suits of the numeral series have the old marks: *Coupes*, *Deniers*, *Bastons*, and *Epées*—"Cups," "Money," "Clubs," and "Swords." The court-cards are designated as *Roy*, *Reyne*, *Cavalier*, and *Valet*. The *atouts* are numbered and bear the following names:

I. Le Batelevr.	IY. Lermite.	XVII. Lestoille.
II. La Papesse.	X. La Rove de Fortvne.	XVIII. La Lvne.
III. L'Impératrice.	XI. La Force.	XIX. Le Soleil.
IV. L'Emperevr.	XII. Le Pendv.	XX. Le Ivgement.
V. Le Pape.	XIII.	XXI. Le Monde.
VI. L'amovrevx.	XIV. Tenperance.	Le Mat.
VII. Lecharior.	XV. Le Diable.	
VIII. Iustice.	XVI. La Maison Diev.	

The thirteenth card with the picture of death bears no name, and the twenty-second, the *mat*, is not numbered. It will be observed that the suit-marks are similar to those of Italy, this being almost uniformly the case with *Tarot* packs.

90. TAROK-KARTEN.⁵ Playing-Cards. Tarots. Frankfurt-am-Main.⁶ Germany. Nineteenth century.

Pack of seventy-eight cards, comprising fifty-six numerals and twenty-two *atouts*. The numerals bear French suit-marks, and the court-cards pictures of historical personages. The King of Diamonds is Charles I; the Queen, Elizabeth; the Knight, Marlborough, and the Knave, Shakespeare. The Hearts bear French portraits; the Spades, Russian, and the Clubs, German. The *atouts* are numbered from I to XXI, and are ornamented with pictures referring to the four nations: England, France, Germany, and Russia.

¹ Cat. No. 15555, Mus. Arch., Univ. Penn.

² Emilia Angiolini.

³ Lent by Stewart Culin.

⁴ Probably made in Switzerland. A similar pack of French *Tarots* in the University Museum (Cat. No. 19316) is inscribed "Jacque Burdel Cartier a Fribourg en Suisse, 1813."

⁵ Cat. No. 15716, Mus. Arch., Univ. Penn.

⁶ B. Dondorf.

German *Tarot* packs, called *Tarok*, vary greatly in their ornamental and symbolic designs from the Italian cards from which they are manifestly copied.

91. JEU DES 78 TAROTS ÉGYPTIENS.¹ Paris,² France. Nineteenth century.

Set of seventy-eight numbered cards, intended for fortune-telling, with designs copied from the *Tarot* pack. Accompanied by a handbook, entitled *Art de Tirer les Cartes*.

The use of cards for the purpose of fortune-telling is well known. Indeed, it is the opinion of some authorities that cards were introduced into Europe for the purpose of divination and fortune-telling, by the Gypsies, some time between 1275 and 1325. There is evidence that cards were used for this purpose early in the sixteenth century. According to Willshire, recourse to cards for divinatory purposes gradually declined among the upper classes until the middle of the eighteenth century, though it prevailed, no doubt, among the lowest grades of society frequenting fairs and the caravans of mountebanks. In 1750, divination with cards again became popular, and at this period, in 1753, a perruquier, named Alliette, who reversed the letters of his name, and called himself Etteilla, superseded the ordinary practice of employing the cards of the pack singly, and substituted the art of reading the mysteries they might unfold when the whole sequence was arranged upon a table.

The emblematic figures of the Tarot pack have been the object of much speculation, and their origin is said to extend back to the ancient Egyptians, from whom they have descended to us as a book or series of subjects of deep symbolic meaning. The discovery and explication of this supposed source and hidden meaning of the Tarots employed in modern times was claimed by M. Court de Gebelin in 1781. He asserts that the series of seventy-eight Venetian Tarots has an unquestionable claim to be regarded as an Egyptian book, and that it is based upon the sacred Egyptian number seven. Alliette applied the theories of M. de Gebelin to the use of cards in fortune-telling, and numerous packs are made even at the present day to be used in accordance with the system which he formulated.

92. CARTE DA GIUOCARE. Playing-Cards.³ Bologna,⁴ Italy. Nineteenth century.

Forty cards of four suits: *Coppe*, *Danari*, *Spade*, and *Bastoni*; the court cards, *Re*, *Regina*, and *Fante*; the numerals, ace to seven, the eights, nines, and tens being suppressed, agreeing with the pack used in the Spanish game of *El Hombre*.

The above may be regarded as a characteristic Italian pack. A distinctive character of the marks of the numerals in the suits of *Spade*

¹ Cat. No. 9010, Mus. Arch., Univ. Penn.

² J. Lismon.

³ Cat. No. 15594, Mus. Arch., Univ. Penn.

⁴ Pietro Barigazzi.

and *Bastoni* is the mode in which they are interlaced or connected together in place of standing separately or apart. The curved forms, too, of the *Spade*, or swords, are specially Italian in design. The designs on cards vary in different parts of Italy. Thus in the south, cards with Spanish marks are used, while the Florentine pack bears French suit-marks. Cards are made at the present day in many of the Italian cities. Each maker supplies not only those of the local type, but usually those of other cities. Stencils are still used for some of the cheaper cards.¹

93. CARTE DA GIUCARE. Playing-Cards.² Naples,³ Italy.

Forty cards of four suits like the preceding, except that the suit-marks are similar to those on Spanish cards.

94. CARTE DA GIUCARE. Playing-Cards.⁴ Florence,⁵ Italy.

Forty cards of four suits like the preceding, except that the cards bear French suit-marks. Designated as *Carte Romane*.

95. TRAPPOLA CARDS.⁶ Austria. Nineteenth century.

Thirty-six cards of four suits, agreeing with the Italian, except that the *danari* are replaced with conventional flowers. The three, four, five, and six of numerals are suppressed. The court-cards are *Re*, *Cavallo*, and *Fante*. These cards are remarkable for their length, being $5\frac{5}{16}$ by $2\frac{5}{16}$ inches.

According to Willshire, there are no marks special to *Trappola*, it being played with a series of numerals, of which the three, four, five, and six of each suit are suppressed, and as long as this is done it may be played with cards showing no matter what marks of suits. From the circumstances of its being a Venetian game, the original marks of the suits were naturally the Italian ones.⁷

96. HISPANO-AMERICAN CARDS. Reproductions⁸ of originals in the Archives of the Indies. Seville, Spain.

(a) Facsimile in color of an uncut sheet, 11 by 17 inches, with wood-block impression of twenty-four cards colored in red, blue, and black, 2 by $3\frac{1}{2}$ inches. They represent the court cards of the suits of *Copas*, *Oros*, *Espadas*, and *Bastos*, and ten numeral or pip-cards of the suit of swords. There are but three court-cards for each suit instead of four,

¹ The following list of Italian card games is given by Mr. W. W. Story (Roba di Roma, I, p. 160): *Briscola*, *Tresette*, *Calabresella*, *Banco-Fallito*, *Rossa e Nera*, *Scaraccoccia*, *Scopa*, *Spizzica*, *Faraone*, *Zecchinetto*, *Mercante in Fiera*, *La Bazzica*, *Ruba-Monte*, *Uomo-Nero*, and *La Paara*. Descriptions follow of *Zecchinetto*, *Briscola*, *Tresette*, and *Calabresella*.

² Cat. No. 15563, Mus. Arch., Univ. Penn.

³ Vincenzo Russo.

⁴ Cat. No. 15603, Mus. Arch., Univ. Penn.

⁵ Antonio Poli.

⁶ Cat. No. 15738, Mus. Arch., Univ. Penn.

⁷ Similar cards to those exhibited are used at the present day in Silesia.

⁸ Made for the author in Madrid through the courtesy of the late Señor Don Justo Zaragossa.

as in the present Spanish pack. The marks of the numeral suit consist of crossed swords instead of being arranged as on the current Spanish cards. The back of this sheet bears an inscription in pen and ink: *Nueva Espana, 1583. Archivo de Indias, No. 117. Dibujo.*

(b) Photograph of uncut sheet of the same size, imprinted with designs for the backs of eighteen cards. The devices are all different, and embrace a mixture of Mexican and European subjects, including the Emperor Montezuma (fig. 226), his successor, Quahatemotzin, native priests performing various rites, and grotesque figures, apparently of the school of Albert Dürer.¹

Playing-cards, early introduced by the conquerors, were known to the ancient Mexicans under the *amapitolli*.²

97. NAIPES. Playing-Cards.³
Cadiz, Spain. Nineteenth Century.

Forty-eight cards of four suits, *Copas, Oros, Espadas,* and *Bastos*: "Cups," "Money," "Swords," and "Clubs." The court cards are *Rey, Caballo,* and *Sota*: "King," "Knight," and "Knave." This is the legitimate Spanish pack, the tens, as is customary, being suppressed.

According to Willshire, no remains of very old Spanish cards have reached our time. The Hispano-American cards in the Archives of the Indies at Seville (No. 96) are probably the oldest Spanish cards in ex-

istence. Spanish cards are characterized by certain peculiarities evinced by actual examples and historical allusions. Spanish *Tarots* are unknown, and it is doubtful if such ever existed. All Spanish packs are of the numeral kind. In a legitimate Spanish pack there are only forty-eight cards instead of fifty-two. There is no Queen among the



Fig. 226.

REVERSE OF HISPANO-AMERICAN PLAYING-CARD.

(The Emperor Montezuma.)

Impression, $2\frac{1}{2}$ by 4 inches.

Mexico, 1583.

From photograph of original in Archives of the Indies, Seville, Spain.

¹ The early publication of these card-sheets with explanatory notes is intended by the writer.

² Compounded of *amall*, "paper," with *patolli*, a general word for a game of any kind, derived from *patou*, "to play a game" (D. G. Brinton). Again we have *quauh patolli*, "wood game" = chess.

³ Cat. No. 167574, U.S.N.M. Gift of Dr. G. Brown Goode.

honors, her place being supplied by a *Caballero* or *Caballo*. The marks are similar to those of Italy, but the Spanish designs differ from the former, as do the figures on the coat-cards. While the Italian kings are seated, the Spanish kings are erect, and their vast mantles are surcharged with large ornaments, as in the case of the French kings. The swords are straight, double-edged rapiers; the batons, knotty branches of trees, and these knotty branches are placed sometimes horizontally, sometimes vertically, close to each other, but always so arranged that they are never interlaced in the manner common to the numeral-cards of the Italian *Tarots*.

98. NAIPES Playing-Cards.¹ Cadiz, Spain. Nineteenth Century.
Purchased in Peru.

Pack of forty cards similar to preceding, except that eights, nines, and tens are suppressed. Such a pack was used for the Spanish game of *El Hombre* or *Ombre*.

99. PLAYING-CARDS.² Apache Indians. United States.

Pack of forty cards painted with native colors upon tanned hide. Four suits of ten cards each, directly copied from the Spanish cards, No. 98, but with the designs of the suit-marks and court-cards modified to accord with native ideas.

Capt. John G. Bourke informed me that the Apache have borrowed many of the words relating to playing-cards, as well as the cards themselves, from the Mexicans. The four suits they call *Copas*, *Escudos*, *Espadas*, and *Bastones* or *Palos*. The names of *Rey* and *Sota* are the same as in Spanish, but the *Caballo* is *Jliv* or "Horse." The Ace they call *As*, but for the other numerals native names are used: *Naqui*, 2; *Taqui*, 3; *Tingui*, 4; *Irosh klay*, 5; *Custan*, 6; *Cusetti*, 7. "Shuffle" is *jli-ka-shi-ache*. Captain Bourke says: "I think this means 'I take or hunt for the horse *Caballo*:' *Jli* or *jliv* = horse; *ka*, abbreviation for *daka* = card; *shi* = I, and *achi* = wish, take, hunt." Out is *da-na*, and cards, *daka* (*carta*). Their game they call *Con-quien*, "with whom?" It is also known by the native name of *Daka-cunitsnun* = "Cards ten." The *Rey* or King is also called *Inju* or *Inshu* = "Good."

100. PLAYING-CARDS. Celebes.³ Nineteenth century.

Pack of forty cards painted in red, yellow, green, and black on white cardboard, with red backs. Four suits of ten cards, with the numerals eight, nine, and ten suppressed. Degenerate European cards, corresponding with the Spanish pack, No. 98, from which they appear to have been derived.

101. CARTES À JOUER. Playing-Cards.⁴ Piquet pack. Paris, France.
Nineteenth century.

Thirty-two cards. Suits: *Carreaux*, *Cœurs*, *Piques*, and *Trefles*.

¹ Cat. No. 7111, Mus. Arch., Univ. Penn.

² Cat. No. 10490, U.S.N.M.

³ Cat. No. 154088, U.S.N.M. Collected by Mr. Victor Janny, United States Consular Agent.

⁴ Cat. No. 7594, Mus. Arch., Univ. Penn.

The kings bear the names of Caesar, Charles, David, and Alexander; the queens, Rachel, Judith, Pallas, and Argine; and the knaves, Lahire, Hector, Hogier, and Lancelot.

The earliest French cards known are said to be those in the Carpentier collection. These cards are fourteen in number, painted by hand about the commencement of the fifteenth century. They bear the same suit-marks as the French cards of the present day. These marks were so persistently maintained and introduced on cards exported to all countries that a regular type or class of cards became known as French cards, as opposed to Italian cards on the one hand and to German cards on the other.

At first the figure-cards or honors were without names on them, but about the last quarter of the sixteenth century names were attached. French playing-cards having on them the suit-marks, *Cœurs*, *Carrcaux*, *Trefles*, and *Piques*, are often termed *Piquet* packs. The game of *Piquet* is one in which, up to the beginning of the eighteenth century, the pack consisted of thirty-six cards, the two, three, four, and five of each suit being suppressed, as in *Trappola* and the *Tarocehino* of Bologna. From the date mentioned the six of each suit has been omitted, so the *Piquet* pack has now but thirty-two cards.

102. SPIEL-KARTEN. Playing-Cards.¹ Frankfort-on-the-Main,² Germany. Nineteenth century.

Pack of thirty-six cards of four suits: *Herzen*, *Laub*, *Eicheln*, and *Schellen*, or "Hearts," "Leaves," "Acorns," and "Bells." The numerals are ace, six, seven, eight, nine, and ten, the suppression of the two, three, four, and five being a peculiarity of the true German pack. The court-cards are the *König*, "King," and the *Obermann* and *Untermann*, superior and inferior valets.

Willshire states that, according to trustworthy authorities, allusion is made to playing-cards in the *Pflichtbücher* of Nürnberg for 1384, and there is extant an ordinance of the town council of Ulm for the year 1397 prohibiting their employment. "It is probable," he says, "that the Germans very soon altered for themselves the Italian marks of the suits, making use of figures of animals for differentiating the latter." The earliest German cards known have dogs, falcons, stags, and ducks for suit-marks. These "animated" cards were, however, soon followed by a series having the more national signs of *Roth* or *Herzen*, *Laub* or *Grün*, *Eicheln*, and *Schellen*, or Hearts, Leaves, Acorns, and Bells.

103. SPIEL-KARTEN. Playing-Cards.³ Leipsic, Germany. "La Belle Alliance."

Pack of thirty-six cards with German suit-marks, like the preceding. Numerals bear colored pictures of the battle of Leipsic, 1813; the Kings, portraits of the allied sovereigns, and the other court-cards, generals.

¹ Cat. No. 15712, Mus. Arch., Univ. Penn.

² B. Dondorf.

³ Cat. No. 17826, Mus. Arch., Univ. Penn. Collected by Col. Joseph G. Rosengarten.

104. SPIEL-KARTEN. Playing-Cards.¹ Vienna,² Austria.

Pack of thirty-two cards with German suit-marks. Court-cards bear pictures of the heroes of the story of William Tell; the Aces emblematic pictures of the four seasons. Designated as *Schweizer Deutsche*.

105. SPIEL-KARTEN. Playing-Cards.³ "Swiss cards." Schaffhausen, Switzerland. Nineteenth century.

Pack of thirty-six cards bearing as suit-marks, Bells (*schellen*), Flowers (*blume*), Shields (*schildchen*), and Acorns (*eicheln*). The numerals comprise the Ace, Two, Six, Seven, Eight, and Nine; the court-cards, *König*, *Ober*, and *Unter*.

Willshire states that the old cards of Switzerland were evidently derived from Germany. The numeral cards of Schaffhausen are as above, while they run from 1 to 9 in those of Soleur.

106. SPIEL-KARTEN. Playing-Cards.⁴ Swiss views and costumes. Schaffhausen,⁵ Switzerland. Nineteenth century.

Whist pack of fifty-two cards with French suit-marks. The backs of the cards and the Aces bear pictures of Swiss scenery, and the court-cards Swiss peasants in the costume of different Cantons.

107. SPILLE-KORT. Playing-Cards.⁶ Denmark.⁷ Nineteenth century.

Whist pack of fifty-two cards with French suit-marks.

108. KILLE-KORT. Playing-Cards.⁸ Swedish.⁹ Nineteenth century.

Pack of forty-two cards, printed in black on lavender-colored card-board, comprising two each of a numerical series from one to twelve, marked with fleur-de-lis, and two each of the following picture cards:

Blären, fool.

Arlequin, harlequin.

Pottan, flower pot.

Krans, wreath.

Wardshus, inn.

Husu, boar.

Carall, knight (horseman).

Husar, hussar.

Cucu, cuckoo.

The name of the game, *Kille*, is applied to the harlequin. According to the work cited below, this game is known in Sweden by the name of *Cambio*, "exchange."

A corresponding modern Danish game called *Gnavspil*,¹⁰ in the

¹ Cat. No. 15686, Mus. Arch., Univ. Penn.

² Josef Glanz.

³ Cat. No. 17823, Mus. Arch., Univ. Penn.

⁴ Cat. No. 15726, Mus. Arch., Univ. Penn.

⁵ Jean Müller.

⁶ Cat. No. 7598, Mus. Arch., Univ. Penn.

⁷ L. P. Holmblad, Kjöbenhavn.

⁸ Cat. No. 16576, Mus. Arch., Univ. Penn.

⁹ These cards, purchased in Chicago, bear the legend "Chicago" on the wrapper, and were probably made in the United States.

¹⁰ S. Salomon & Co., Copenhagen.

University Museum,¹ consists of forty-two cards lithographed in colors, comprising two each of a numerical series, from zero to twelve, and two each of the following picture-cards:

Narren, fool.
Uglen, owl.
Potten, vase.
Huset, house.
Katten, cat.
Hesten, horse.
Dragonen, dragoon.
Gjegen, cuckoo.

109. CUCU CARDS.² Bari,³ Italy.

Pack of forty cards, printed in colors, comprising two each of a numerical series from one to ten, in black, and two each of the following picture-cards:

Matto, fool.
 00. *Muscherone*, gorgon.
 000 *Secchia*, bucket.
 0000. *Nulla*, nothing.
 XI. *Taverna*, inn.
 XII. *Gnaf*, cat.
 XIII. *Salto*, horse.
 XIV. *Tuffo*, bravo.
 XV. *Cucu*, cuckoo.

and a card with a rampant lion holding a shield inscribed *diletterole giuoco dell chuchu*.

A corresponding modern *Cucu* pack from Bologna,⁴ in the same Museum,⁵ is printed in colors, but with older and ruder designs, and is similar to the preceding, except that the numbered cards have Roman numerals and bear rude colored pictures of Italian cities, among which Pisa may be recognized by its leaning tower.

110. HEXEN-KARTEN ("Witch Cards").⁶ Germany.

Pack of thirty-two, printed in colors, comprising twelve cards, with Roman numerals from I to XII, printed in red, and two each of the following picture-cards:

LEGEND.	DEVICE.
<i>Nur</i> ,	Fool.
<i>Hex</i> ,	Witch.
<i>Glass</i> ,	Glass.
<i>Düller</i> ,	Plate.
<i>Würst</i> ,	Sausage.
<i>Einkert</i> (come in), }	Inn.
<i>Auszahl</i> (pay up), }	
<i>Miau</i> ,	Cat.
<i>Hott</i> ,	Horse.
<i>Werda</i> ,	Sentry.
<i>Pfeift</i> ,	Parrot.

¹ Cat. No. 19157.

² Cat. No. 15528, Mus. Arch., Univ. Penn.

³ Guglielmo Murari.

⁴ Pietro Marchesini.

⁵ Cat. No. 15751.

⁶ Cat. No. 15735, Mus. Arch., Univ. Penn.

The pictures on each pair of cards differ in details from each other.

A similar pack of *Hexen-karten* in the University Museum,¹ probably made in Nürnberg in the seventeenth or early in the eighteenth century, consists of thirty-two cards printed in colors, comprising twelve cards with Roman numerals, printed in black, from I to XII, and two each of the following cards:

LEGEND.	DEVICE.
<i>Narr</i> ,	Fool.
<i>Hex (here)</i> ,	Witch.
<i>Glass</i> ,	Glass.
<i>Düller</i> ,	Plate.
<i>Würst</i> ,	Sausage.
<i>Einkert (come in)</i> ,	} Inn.
<i>Ausalt (pay up)</i> ,	
<i>Miau</i> ,	Cat.
<i>Hott</i> ,	Horse.
<i>Werda</i> ,	Sentry.
<i>Pfeift</i> ,	Parrot.

The numeral cards are inscribed at the top *número*, and below the number are pictures of cities, which, upon comparison, prove to be highly conventionalized copies of the pictures of Italian cities on the cards from Bologna. A very complete account of this game is given by K. A. Bierdimpfl,² who states that in Germany the game has different names, that of *Hexen* or "witch" cards being the local name in old Bavaria. The game exists in France under the name of *Coucou*.

The following table illustrates the interrelation of the preceding Italian, German, Swedish, and Danish packs:

Italy.	Germany.	Sweden.	Denmark.
CUCU.	HENEN-KARTE.	KILLE KORT.	GNAVSPIL.
<i>Matto</i> .	<i>Narr</i> .	<i>Blären</i> .	<i>Narren</i> .
00 <i>Mascherone</i> .	<i>Hex</i> .	<i>Arlequin</i> .	<i>Uglen</i> .
000 <i>Secchia</i> .	<i>Glass</i> .	<i>Pottan</i> .	<i>Potten</i> .
0000 <i>Nulla</i> .	<i>Teller</i> .	<i>Kraus</i> .	0
I	I	1	I
II	II	2	II
III	III	3	III
IIII	IIII	4	IIII
V	V	5	V
VI	VI	6	VI
VII	VII	7	VII
VIII	VIII	8	VIII
VIIII	IX	9	IX
X	X	10	X
	XI	11	XI
	XII	12	XII
	<i>Würst</i> .		
XI <i>Taverna</i> .	<i>Einkert</i> .	<i>Wardshus</i> .	<i>Huset</i> .
	<i>Auszahlt</i> .		
XII <i>Gnaf (enao)</i> .	<i>Miau</i> .	<i>Husu</i> .	<i>Katten</i> .
XIII <i>Salto (salta)</i>	<i>Hott</i> .	<i>Cavall</i> .	<i>Hesten</i> .
XIV <i>Tuffo</i> .	<i>Werda</i> .	<i>Husar</i> .	<i>Dragonen</i> .
XV <i>Cucu</i> .	<i>Pfeift</i> .	<i>Cucu</i> .	<i>Gjegen</i> .

¹ Cat. No. 15736.

² Die Sammlung der Spielkarten des bayerischen Nationalmuseums, München, 1884.

111. IGRALNYE KARTY. Playing-Cards.¹ Russia. Nineteenth Century.

Whist pack of fifty-two cards, French suit-marks, and court-cards similar to those of France.

The manufacture of playing-cards in Russia is a State monopoly, of which the revenue is applied to the support of the charitable establishment known as the "Institutions of the Empress Marie."

112. PLAYING-CARDS.² England.³ Nineteenth century.

Whist pack of fifty two cards. Suits: Diamonds, Hearts, Spades, and Clubs.

According to Willshire, it is probable that cards made their way into England through France. The date of their introduction is not known, but it is believed they were not in use until after the reign of Henry IV (1405), and they were certainly employed previous to 1463. About 1484 they formed a common English Christmas pastime. England appears to have at once adopted the French suit-marks. The English names of the suits, however, are in part of Spanish descent.

113. PLAYING-CARDS.⁴ Philadelphia,⁵ United States. About 1860. "Club House" (Philadelphia Club).

Whist pack of fifty-two cards, ordinary suits; court-cards bear full-length figures instead of being double-headed.

Similar cards are still made for use in certain games.

114. PLAYING-CARDS.⁶ "Union." New York,⁷ United States. 1862.

Whist pack of fifty-two cards and a joker. The suit-marks are stars, flag of the United States, shield with national emblems, and national arms (eagle with shield). The Kings bear a picture of an infantry officer in full dress; the Queens, the Goddess of Liberty; and the Knaves, an artillery commissioned officer in full dress.⁸

115. PLAYING-CARDS.⁹ "Picture Playing-Cards" (American Generals). New York,¹⁰ United States. 1863.

Whist pack of fifty-two cards. Conventional suits. Each card bears the portrait of a General of the Union Army, the denomination of the card being displayed on a miniature card in the left-hand corner.

¹Cat. No. 16572, Mus. Arch., Univ. Penn.

²Cat. No. 15452, Mus. Arch., Univ. Penn.

³De La Rue & Co., London.

⁴Cat. No. 7603, Mus. Arch., Univ. Penn.

⁵Samuel Hart & Co.

⁶Cat. No. 154289, U.S.N.M. Gift of Stewart Culin.

⁷American Card Company.

⁸Mr. A. Howard Clark, to whom I am indebted for the identification of the uniforms, states that the rank of the infantry officer representing the King is not shown on epaulettes, "probably Colonel or Lieutenant Colonel; if a General, the buttons on coat would be arranged in groups. The rank of the artillery officer is not shown on shoulder straps."

⁹Cat. No. 7100, Mus. Arch., Univ. Penn.

¹⁰M. Nelson.

116. PLAYING-CARDS.¹ England. About 1863.

Whist pack of fifty-two cards with regular suit-marks. Backs bear Confederate flags and seal with legend, "Confederate States of America."

117. PLAYING-CARDS.² Harlequin. New York,³ United States. 1879.

Whist pack of fifty-two cards with conventional suit-marks incorporated into comic pictures.

118. PLAYING-CARDS.⁴ "Political Euchre." Philadelphia,⁵ United States. 1888.

Pack of fifty-two cards and two jokers, with portraits of opposing candidates, the governors and number of electoral votes cast by each State.

119. PLAYING-CARDS.⁶ Political Comic. New York,⁷ United States, 1888.

Whist pack of fifty-two cards with joker and key to the face cards. The suit-marks are conventional. The court-cards bear caricature portraits of the politicians of the time.

120. PLAYING-CARDS.⁸ World's Fair Souvenir. Chicago. 1893.

Whist pack of fifty-two cards and a joker (Uncle Sam). Views of Columbian Exposition, with denominations marked with suits, distinguished by letters and numerals, in corners. Kings bear portrait of Director-General Davis; Queens, Mrs. Potter Palmer; and Jacks, Columbus.

¹ Cat. No. 126106, U.S.N.M. Presented by Mr. Paul Beckwith.

² Cat. No. 7601, Mus. Arch., Univ. Penn.

³ Tiffany & Co.

⁴ Cat. No. 7766, Mus. Arch., Univ. Penn.

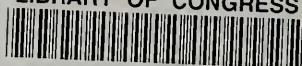
⁵ Lum Smith.

⁶ Cat. No. 7101, Mus. Arch., Univ. Penn.

⁷ A. H. Caffee.

⁸ Cat. No. 16501 Mus. Arch., Univ. Penn.

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